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# MEDICAL REPOSITORY.

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## ORIGINAL ESSAYS.

REMARKS *on some late European Medical Works and Proceedings respecting* CONTAGIOUS DISEASES *and* YELLOW FEVER. *In a Letter to* JOHN R. B. RODGERS, *M. D. President of the Medical Society of the County of New-York, late Professor in the Faculty of Physic in Columbia College, and Health Officer of the Lazaretto of New-York, &c. By* FELIX PASCALIS, *M. D. formerly Member of the Board of Health, and of the Academy of Medicine of Philadelphia; Member of many ancient Medical Institutions in the United States, Physician and Surgeon to the Hospitals at Bellevue, &c.*

*New-York, November* 1, 1816.

DEAR SIR,

FEELING anxiously interested for the progressive adoption of medical doctrines which are founded on the authority of reason, fact, and theory; hoping also, that a just reliance may always be placed on the opinions of the principal body of American physicians; I now take the liberty of addressing you on a subject which, of late years, has excited much attention among the physicians and learned bodies of Europe, and upon which they have, as it were, passed sentence against us, and against doctrines, of which we should, at least, be as competent judges as themselves.

Had it been my lot to have visited with you some distant and unfrequented region, and supposing that our

accounts from thence of some extraordinary occurrence, or of other important events, were now rejected, as untrue or erroneous, I would, Sir, attempt to vindicate our reports by the evidence of your own testimony; for you are one among the few surviving practitioners in the time of the pestilence which, twenty-five years ago, commenced its ravages in this and other populous cities of the United States. You were afterwards placed, during many years, as a sentinel at the only avenue through which an ambulatory contagion could be introduced into this port; and there, your vigilance and responsibility have been exercised with as much attention and honour as you were pledged to do for your fellow-citizens, who had long known your integrity and eminent talents.

I shall require your attention to many retrospective circumstances, events, and discussed opinions, before I advert to several late European works, and proceedings of colleges, with a view of examining whether we have been wanting in arguments, observations, and authority; and whether we have properly tested all objections that have been offered against our doctrine, asserting, that no *specific human* and contagious poison has ever been imported to constitute yellow fever.

It is the fate of all subjects essentially connected with the preservation of life, always to create controversy, according to the different views or modes by which they may best contribute to the welfare of society, until truth and conviction form a majority of opinion. Still, with the best motives, oppositions will continue active, or gradually sink into some equivocal explanation, or into silence. After the truly deplorable prevalence of yellow fever in Philadelphia, during the summer and fall of 1793, which I witnessed throughout, two great questions were at first started among the physicians and public functionaries, 1st. Whether it had been imported from foreign ports, or whether it had been epidemically generated in the city. 2d. In this latter case, whether or not it had been propagated by contagion.

Numerous were the writers who engaged on both sides of the question, by a newspaper controversy; but the first was soon peremptorily decided by Dr. Ramsay,

of South-Carolina; by Dr. Benjamin Rush, of Philadelphia; and by Noah Webster, Esq. of Connecticut. As yet, no greater authority, in point of inquiry, had been produced, than the interesting narrative of Mr. Matthew Carey, a bookseller, who advocated the opinion of the foreign importation of the pestilence in that year. May I take the liberty of placing myself in a little corner of that early period (1793), with a Dissertation on the atmospheric Causes of the same Epidemic, which, as a prize question, received the academic honours of the State Medical Society of Connecticut? However differently the above writers, and others, undertook to explain their respective theories of the domestic origin of the yellow fever, I need not to recapitulate how they uniformly united against all alleged facts and arguments which were offered to prove that it proceeded from a specific human imported and contagious seminium.

The summer of 1794 created again many cases of the same disorder in Philadelphia, a great proportion of which proved fatal; but it raged generally in New-York in 1795. After one year of uninterrupted health, it was again renewed in the former city, during the summers and fall of 1797 and 1798, with an uncommon degree of malignancy. It broke out in Boston, Norfolk, and Charleston at the same time. This period must have been particularly favourable to its formation and diffusion, as it was observed in the populous settlements in the interior of the country, which had not any possible communication with the seacoast; and this circumstance naturally increased in number the advocates for the domestic origin. Now this general and interesting topic began to be more methodically treated by Dr. Benjamin Rush, and by the Editors of the Medical Repository, Drs. Mitchill, Miller, and Elihu H. Smith; whose periodical and very instructive work (1797), became the vehicle of numerous essays, reports, facts, and reviews of publications on that subject. These were very interesting, and the more entitled to all possible credit, as they were the result of local observations and experience, in the face of all the opposition that the country could unite. The principal among the writers who joined in opinion with the Editors of the Medical

Repository, were Seaman, Rand and Brown, Channing and Coit, Selden and Whitehead, Davidge and R. Bailey, Felix Pascalis, &c.*

To this period (1798) we must refer the adoption in the United States, of new quarantine laws for men, vessels and goods, in imitation of the old European health laws and Lazarettos, which had been laid aside with the Colonial Government. Thomas Mifflin, Governor of Pennsylvania, applied to the general body of physicians of Philadelphia for their opinion and advice on the subject. They were then divided into two distinct bodies—the College and the Academy of Medicine: this last institution was, however, more numerous, and contained nearly as many champions of the domestic origin of the yellow fever as members that composed it; while, on the other side, Dr. William Currie alone was left to fight the battles of the College in favour of the importation of the contagion, which task he performed honourably and smartly indeed!†

The wise Governor of Pennsylvania, and the Legislature of that State, thought it best to leave physicians to settle their controversy themselves, but to be guarded against all dangers, both of domestic origin and of importation of the yellow fever, by submitting vessels from tropical ports, during the spring and summer months, to thorough ventilation, cleansing, and purification, and men or goods to detention and quarantine. The latter part of this system of health-laws must ultimately prove very absurd, when it is considered that, on its departure from an infected port, no better purification of the whole vessel could be effected than that of a sea voyage, through necessary or constant ventilation; while a state of rest and quarantine is so favourable, especially after the opening of the hatches, to fermentation, putridity, and engendering pestilential or deleterious miasmata, which did not exist before. The sooner a foreign vessel could be unladen and cleansed, the goods aired, and the men removed, dispersed, and allowed to enjoy motion and activity, the more efficient our health laws would be.

* Vide Medical Repository, old series, *passim*.

† Vide Medical Repository, vol. ii. p. 74, 295.

However unanimously the advocates for a general and domestic agency of yellow fever had thus progressed against those of the importation of human contagion adhering to ships, sails, rigging, goods, and produce from distant countries, yet they could not keep the same understanding on its infecting power. Some of them having been too exclusive in their hypothesis of the local sources of animal or vegetable putrid miasmata, were consistently obliged to acknowledge, that one or many persons labouring under the pestilence, and assembled in a room, might, within a certain limit of space and time, reproduce the disease on healthy subjects; as it is admitted of local epidemics, or jail, camp, and hospital fevers; and also of puerperal fevers, in lying-in wards, &c. Thus many of the first writers and observers on this question, were seldom found varying from this doctrine; Dr. Rush himself had espoused it, and defined the yellow fever as *infectious*, or *contagious:* he soon afterwards corrected his opinion.* Others also have placed the cause of pestilence in the atmospheric agency of heat, moisture, winds, and combinations of airs, or gases, which are evidently aggravated by local causes. These opinions have not yet been clearly compared, and probably will not, until the mystery is unveiled of all the deleterious principles which have the power, by inhalation, to affect or destroy vitality, and thereby to constitute a pestilential form of disease.

By the year 1800, the question of the non-importation of the yellow fever was officially asserted by the Academy of Philadelphia, by the Medical Societies of Charleston and New-York, and also by the Humane Society of Boston. "Nothing," said Dr. Rush, "could be offered to shake an opinion established by facts and by reason."

The learned of Europe had not yet taken any part with our controversies, when, under the auspices of public authority, we were favoured, for the first time, with a Memorial of practical advice by the Faculties of Marseilles and Montpelier. It had been solicited by the Secretary of State, Timothy Pickering, Esq. through the agency of the Consul of the United States in the

* Vide Medical Repository, vol. vi. p. 135.

latter port. The intentions, on all sides, were good; but this transatlantic communication in support of a doctrine which we had exploded, could neither amuse nor instruct the American physicians, whose gratitude, however, was felt, and particularly adverted to, by some remarks in page 350 of the third volume of the Medical Repository.

Something more important in that kind of foreign assistance, and unasked, came to us soon after from Dr. Haygarth, Fellow of the Royal Society of London, &c. under the title of a Letter to Dr. Percival of Manchester. It was not only meant as a book of counsel and advice to the good people of the United States, on the importable contagion of the yellow fever, but as an admonition to their physicians, from a rigid and intolerant teacher. He disrespectfully assumed more authority than judgment and good breeding can permit in professional controversies, and to which his own experience had never entitled him. As a follower of our opponents in this country, he certainly could not edify them; nor did he instruct us. He was vigorously and speedily refuted. I hope he has lived to read the fifth volume of the Medical Repository, pages 179 and 330, to learn manners and things of which he was certainly not aware, when he commenced for us his lecture on the yellow fever.

It is not my intention in this retrospective account, to enumerate all the valuable essays, papers and documents against the importable contagion of yellow fever, which have been successively offered to us in this country, or else I should at least advert to Dr. Mitchill's Essay on Quarantine Laws, to his Review of the British Quarantine Law, to the celebrated Report of the late Dr. Miller, and to your own Report or Controversy on the Fever at Brooklyn. With equal justice it would be then necessary to produce the corresponding arguments of the oppositionists. I decline undertaking this task, not as a difficult one, for we would only find two literary champions of note in this part of the world, but because the syllabus of the doctrine of the contagionists is simple, and very easily understood, as it is disconnected from speculative philosophy, or from abstract hypotheses. It

principally divests itself of the obligatory *rationale* of substantiating the human specific poison of pestilence under some kind of form or vehicle, as it is done in other contagious diseases: it is afterwards proved by facts which rarely preclude the agency of atmospheric or of local causes, and the evidence of which is logically the same as the belief of apparitions or returning ghosts, which many have *seen*, and which thousands have as good a right to deny that they ever have existed. But, Sir, I shall now require your attention, if you please, to some remarks which are necessarily called forth on the *American Medical and Philosophical Register*. This work was principally intended to oppose the doctrine of the domestic origin of the yellow fever, which had been disseminated, to the *discredit of the country, and loss of many lives*,* and to keep up the strictest observation of the quarantine laws.† We must be allowed to inquire, how successfully it has attained its object, at least in Europe, and how far we have been a *discredit* to the country.

It was commenced in this city, July, 1810, in the form of a periodical and quarterly publication, and as conducted by a *Society of Gentlemen*. In 1814, it was interrupted at the completion of four large volumes, and is now exhibited under the shape of a Second Edition, bearing the names of the Editors, David Hosack, M. D. and John W. Francis, M. D. both Professors in our College of Physicians and Surgeons. It is neither with the intention of undervaluing the merit of any of the various subjects that constitute the work, much less of controverting any medical opinion which the Editors have peculiarly cherished, that I now call your particular attention to this well planned performance, in relation to the above explained motives and objects. I shall therefore remark, that when the Medical Register made its first appearance in the world, all controversies on the subject of the contagious yellow fever had entirely ceased, because no general epidemic of the kind had taken place in the United States, except in the village

* Vide Prospectus to the American Medical and Philosophical Register.

† Vide Preface to the same work.

of Brooklyn, during the summer of 1809, which of course renewed various opposite reports on the subject of its origin in that place. The fever, however, fortunately did not communicate to a single individual of the city of New-York, except to those (about 20) who had been in that village. With this very conclusive fact in proof of the harmless and innoxious nature of a poison which no quarantine, nor any possible restriction, could have kept off from this large population, had it been contagious, it was hoped that no further agitation and uneasiness would be given to the public mind. If, however, our opponents wished absolutely to put an end to the truce, and renew the contest, they had before them no less than thirteen volumes of the Medical Repository, relative to all matters or documents concerning the yellow fever, and bearing evidence of all occurrences of this disease in the United States since the year 1791; with official documents, and controversies thereon, and summaries of all works published on all sides, ready for examination and refutation in any part of the world. Here was elapsed, therefore, exactly a period of nineteen years for inquiry into the grand question of importable contagion, or of inbred venom, before the Medical Register was commenced!

To any logical and correct searcher after truth the idea must then naturally occur, that whoever was determined to overthrow the *pernicious* doctrines disseminated by thirteen volumes of the Medical Repository, must now ransack all the facts and arguments which had been incessantly adduced in their pages. This double task, Sir, was the more important and necessary, as a very serious and heavy charge had been explicitly preferred generally against all American partizans of importable human pestilential poison, and which exists in the last of the above volumes, (page 53) in the following words:—

"The mistakes concerning the pretended importation of the plague into Marseilles in 1720, and into Messina in 1743, have been fully exposed in our Hex. II. vol. ii. p. 225, and in same Hex. vol. v. p. 156—164. And the mistatements and perversions of facts in these cases are so glaring as to call in question every other alleged in-

stance of imported epidemics or plagues. The fabrications and prejudices connected with the importation of yellow fever into the United States, have been so often detected, that repetition has long ago grown weary of exposing them. Yet, although individual conviction has been wrought in favour of truth and against these errors, still public opinion is unchanged; and at every return of a malignant or yellow fever, however locally engendered, and incapable of being propagated beyond the atmosphere which bred it, society immediately rises in uproar, the neighbouring cities issue proclamations of safety, quarantines are enforced, and intercourse restricted. It is this anti-social and ruinous game which the cities of the United States are playing against each other, that has emboldened the nations of Europe to enact rigorous laws against us, seeing that our towns are equally strenuous in enforcing similar regulations against each other. They do but execute against us our own judgments; they treat us as we treat each other; they pay us in our own coin; they measure to us by our own bushel."

If, then, the Editors of the Medical Register have not followed that reasonable and just mode of inquiry into previous occurrences and arguments; if they have omitted to examine or refute whatever charges of false statements and facts they had established before the existence of their work; it must appear obvious, that their own doctrine stands now upon a very questionable ground; although they may have had the advantage of leading many physicians and philosophers abroad into error, as I will show you presently.

It may be said, however, that they have truly refuted some of our statements and reports in the Medical Repository. Yes, Sir, so they have done as Editors, in two instances only, and in one they have omitted the proof of their assertion.* The other † is the refutation of the celebrated Report of Dr. E. Miller, five years after its publication, and finished just at the period of his death. This refutation is surely ingenious: it was carried on in

* Seagrove's.

† Vide Medical Register, vol. iii. p. 417.

many successive articles, and in different numbers of the Medical Register, but without the name of the author or Editors. The *Second Edition* of the Medical Register traces it, of course, to names who, we suppose, would neither readily claim it as their own production, nor designate its true parentage, after having eulogised, as they have justly done, their deceased antagonist as a physician, than whom none was more sensible of the dignity of his profession, and who was solely guided by principles of honour and integrity, and never influenced, in political opinions, by a spirit of party.*

But, Sir, another more singular and unfair *ruse de guerre*, if it was designed as such, I will now disclose, or rather explain to you. After thirteen years of controversy in the United States, on the great question of the imported or inbred yellow fever, the Editors of the Medical Register published, in the year 1811, a letter from Dr. David Hosack to Dr. Chisholm, containing a new kind of compromise, which he was offering to his old and invariable opponents. It was preceded by the remark, "that the opposition to him appeared to be a dispute more about words than facts:" it quoted also, as very applicable to our controversy, the words of the famous Pascal, in a theological dispute—"La différence qui est entre nous est si subtile, qu'à peine pouvions nous la marquer nous-mêmes."† This compromise was a kind of nosological distinction between contagions diseases, which were communicable, some by contact only, others through the medium of the atmosphere, and the last through some impurities or vitiating causes in the same. Under this last definition, plague and yellow fever, &c. were to be classed. This was indeed a glorious concession to the non-contagionists, which thus deadened or neutralized the human specific venom of the yellow fever in pure atmosperic air, and so much qualified their doctrine of innoxiousness or nullity, unless it proceeded from miasmata, or other morbid or vitiating causes in the air which we breathe, and which, in its various combinations with terrestrial effluvia, we

* Vide Med. Reg. vol. iii. p. 8.
† Ibid. vol. i. p. 68.

acknowledge to be the sole source of pestilential diseases. With this pledge of an approaching conversion to our doctrine, who would not have justly regretted that our embittering contest and disputes should have been so long protracted by great verbosity and useless arguments, when it was now fallen to the ground, since both parties *had disputed more about words than facts?* We might, therefore, be well satisfied to remain in silence, and to expect an universal reconciliation. After this declaration in vol. ii. p. 14, of the Medical Register, it will naturally occur to you, that its Editors would not have opposed us any longer in the question of the non-contagiousness of the yellow fever, at least as far as they admitted it themselves, that is to say, in pure air, and thus would have cheerfully acquiesced in narrowing the field of controversy: far from it, Sir; they have unexceptionably, and on all occasions, treated the subject in its full extent of opposition, particularly in their refutation of Dr. E. Miller's Report; and very inconsistently, too, in the pains which have been taken to prove by reports, affidavits, &c. that the yellow fever had prevailed, and had been communicable at the Wallabout, without the agency of local causes and nuisances, and in the most pure and uncontaminated atmosphere.*

It may now be said in extenuation of all this singular mode of controversy, with a declaration, prepared as it were like an intrenchment at home, against any domestic oppugnation, and on the other hand, an unreserved system of opposition carried and circulated abroad; that the compromise had been rejected and disapproved by Dr. Chisholm. But had it been withdrawn by the author? Far from it; he has affirmed to it as his doctrine, in his appendix to the edition of Thomas's Practice; and he has confirmed it also, in the first volume of the Transactions of our Literary and Philosophical Society, under the title of 'Observations on the Laws governing contagious Diseases, &c. with further explanatory Remarks on the *modus operandi* of impure atmosperic Air in spreading contagious Diseases.'

Eleven years have now elapsed without the occur-

* Vide Med. Reg. vol. ii. p. 95, 278, 283.

rence of any summer epidemic of the yellow fever: it has, however, frequently, and perhaps every year, made its appearance in private practice, or in the hospitals, as a sporadic disease, without communicating to any individual. Authentic documents of such facts are in our hands, but we have always preferred to withhold them from the public, lest we might renew their former alarms, and excite great anxiety among our fellow-citizens. I may also add, that nothing pains me more than, on this occasion, to appear as it were arrayed against gentlemen, and practitioners, to whose eminence and usefulness I cannot feel indifferent, nor wish to be unfriendly, and still less to merit their ill will; but late European writers and learned bodies, probably misled by American authors themselves, have all at once placed us, by their decision, in the light of ignorant, or at least inconsiderate physicians, whose authority the world and posterity must disregard, and, in the very words of the Register, are a *discredit* to their country: nay, Sir, they have assailed the fair fame, and attempted to debase the honour and virtue of the celebrated Dr. Rush.

The first in order of these European works, is a large volume in octavo, entitled, *Du Typhus Americain, ou Fievre Jaune:* On the American Typhus, or Yellow Fever. By Victor Bailly.

Let it be understood, that Victor Bailly had been, in 1802, the Physician-general of the army of Le Clere in St. Domingo; that he witnessed its almost entire destruction by the yellow fever; that he visited other islands, and also the United States; that he was one of the commissioners sent by Napoleon into Spain and Gibraltar, along with Desgenettes and Dumeril, for obtaining useful information on the repeated prevalence of the yellow fever in those countries; that in the year 1805, when I became acquainted with him in Cadiz, I had the pleasure of witnessing that he was a man of high literary acquirements, study, and observation; that he had also visited England, for the declared purpose of examining there several documents and persons of established eminence, &c. To these numerous claims to public respect and confidence may be added, that he is a good and agreeable writer, although very prolix; and that his observations on the

nature, treatment, autopsia of the yellow fever, and other accessory subjects, are really interesting and instructive; yet, after all, reflecting on one very material circumstance, the authority of Bailly is not only questionable in deciding on the contagious nature of the yellow fever, but is entirely invalidated; for, by representing that it has been always traced to men or vessels, even in the West-India islands, he gives no beginning to it, nor can he designate its primordial origin from any endemic or epidemic source whatever. Its poison must, therefore, be coeval with the human species, at least in the new world. What absurdity! His credulity, in adopting and relating all facts alleged to prove communication, is excessive, even on the authority of women, nurses, and others, whose minds, prejudiced by fear, passion, and ignorance, are so liable to accommodate facts to previous impressions, or to such modes of operating only as are best accommodated to their comprehension. Who would believe, that on a subject all-important to philosophy and to the preservation of lives, in which evidence of truth should be extricated with analysis, and with as much caution and diffidence as may be thought necessary in a court of justice, Victor Bailly should fill up no less than fifty pages with Spanish and other stories of imported contagion? We might as well take for granted all the farrago and medley of Spanish chivalrous romances, or their legends of saints and miracles.*

The work of Bailly need only to be read to convince us, that through prolixity and the fatiguing extent of the multiplied details and questions which he has assembled, seemingly to make one of the most complete treatises, he has lost the merit of correctness, and the claim of authority as to the main question. We beg leave to notice his unpardonable contradictions, and some of his strange remarks.

1st. He has entered on his subject just as he has concluded it, by declaring that the yellow fever is contagious; but that sometimes it is not! (pag. xii. pref. and pag. 423.) We are not informed by him of the powerful

* Vide Medical Repository, vol. ix. page 126.

causes which constitute such contradictory laws and results; we must believe him upon his *ipse dixit;* and he is, therefore, far less conclusive than our American antagonist, who has plausibly restrained the imported human contagion by the agency of pure air.

2d. The author premises, that, to have all its properties, the infecting miasma must proceed from a living body, and not from a corpse, (p. 389); yet when he follows the ambulating contagion from place to place, he finds it in all kinds of inanimate materials, goods, clothes, wood, rigging, sails, &c. and always with the same degree of violence. (P. 411, 447, &c.)

3d. The poison is subject to the localities of moisture in temperate seasons, without which it gradually wears out, and must at last be neutralized, even where another kind of pestilence, the plague itself, is raging. (P. 413.) We are told elsewhere, that by passing through several individuals, it acquires greater vigour! (P. 416.)

4th. All epidemics must be traced to the variations of the atmosphere, or to its morbid constitution, according to the authoritative doctrine of Hippocrates and Sydenham. (P. 390.) In every instance, however, of the prevailing yellow fever, during five centuries, which Mr. Bailly has had the patience to pass through and enumerate, he notices no other causes than its introduction from abroad.

5th. The yellow fever is the endemic of America and the West-Indies, just as the plague is endemic of the East. (P. 417.) But since its first introduction into some of the West-India islands in 1647 from Brazil, it *should* always be traced to importation. (P. 88.)

6th. Would it be surprising if the human poison constituting this disease or the plague, were so communicable, so importable, when other diseases also, as catarrhs, phthises, and intermitting fevers, are undoubtedly contagious? (P. 418.)

7th. It is a matter of fact, that the yellow fever seldom attacks children or young persons, and that one half of the females are not subject to it. Yet, to be rapidly infected, nothing more is required than to touch a patient in the last stage. (P. 393.)

8th. The yellow fever ravages every year the most

populous cities of North-America; and this population would be very much thinned, were it not incessantly renewed by the emigrations from Europe and the West-Indies! (vid. pref.) We will now draw up another account for Mons. Bailly. The population of our States, twenty-two years ago, was reckoned to be a little above three millions and a half: it is now certainly near ten millions; and what has that augmentation to do with some thousand deaths by the yellow fever, or with many thousand emigrants?—*Risum teneatis.*

I pass over, Sir, many other contradictions, inconsiderate or incorrect inferences, and even misquotations from English writers, which I suppose were not well understood by M. Bailly. I acknowledge, however, that he has offered some of the best arguments I have ever read in support of his general doctrine, and against that of his opponents; but, that the first have been answered, and the latter long ago refuted, it is his own fault not to be aware of, and will not be my task farther to prove. A systematic theorist should, I conclude, be like a sectary, well prepared to convince his readers, to command confidence, and to make it easier for them to believe than refute him. I apprehend that it has been quite the reverse with M. Bailly. To him alone, after all his labour, remains the cruel necessity of exclaiming as he did in page 357—"The yellow fever baffles all human speculation!"

A second European work, in point of date, is entitled, "*Traité de la Fievre Jaune; Ouvrage couronné par la Societe de Medecine de Bruxelles:*" A Treatise on the Yellow Fever; a work which has obtained the premium of the Medical Society of Brussels. By Louis Cailliot, D. M. chief Physician in the Navy Department. 8vo. pp. 323.

This work, I regret to say, is infinitely inferior to the preceding, and much less to be relied on, in point of facts and argument. In this age of bookmaking, it is difficult to keep pace with every new production in all departments of useful knowledge: new writers themselves have hardly time enough to read all that is necessary to be known in works of a foreign idiom, which they understand but imperfectly; hence they abound in

misquotations, errors of words, and things altogether unpleasant by their frequency. I shall, therefore, glance rapidly over this work, not omitting in the meantime to inform you, that M. Caillio‡ declares also, that the yellow fever is contagious, and sometimes is not so at all. Here is food for all parties. The way he proves his double hypothesis is this:—Any contagious disease, even of the worst kind, must have had a beginning; that is to say, it has been an endemic or sporadic disease, *self-created*, not communicated. The same kind, therefore, may occasionally be reproduced, without contact, or previous absorption of virus. Again; the worst contagious disease may, in progress of time, become so modified as to lose its extreme virulence, and moderate its symptoms, and finally to disappear altogether, or be succeeded by others. This has been the case with the leprosy and other diseases. It may therefore be concluded, that, in many instances, the yellow fever has lost its contagious attribute. (P. 185.)

A few more extracts from this writer will not appear so ingenious, nor give him a greater claim to set his authority against our own, than we would be willing to acknowledge to better writers, and more experienced judges.

1st. The physicians of the United States who admit the importation, are agreed upon the time of its first introduction into Philadelphia in 1699, by the fleet of Admiral Nevill from the West-India islands; and also at the same time into Charleston, by another ship from Barbadoes. Thirty-three years after (1732) it reproduced itself in the same places; and it did so again eleven years after, (1741); for the seminium of this fever, observes our writer Laureat, may remain dormant a great many years. (P. 222.)

Again; since 1793 it has raged every year in the United States; because the unfortunate colonists of St. Domingo carried there, with the remnant of their property, the seed of the disease which was peculiar to their soil, &c. (P. 48.)

2. The physicians of the United States who believe in the domestic origin, are in the right to think so, from the authority of Sydenham, who observes, that many

new diseases may break out in a new country, without having been imported. They suppose also, that this fever is very similar to an Indian disease, called *maltaza-hualt;* for both begin by vomiting of blood, bleeding of the nose, mouth, and intestines. (P. 54.)

3d. The yellow fever originates spontaneously, or from contagion. (P. 105.)

4th. M. Dalmas, a physician, mentions three observations which are very conclusive in favour of contagion, although he prefers the contrary opinion. (P. 213.)

5th. It is well known, that in places where a contagious disease has once prevailed, it may break out again, under similar circumstances. (P. 213.)

There is, I must confess, a novel kind of originality in this work: its author might well say, that he wrote without fear of being contradicted. I regret having neither time nor space to give it a more thorough investigation.

The third performance is entitled, "On the Nature of Contagion in general, and the Laws governing its Operation in various Diseases;" being an answer to a prize question which was long pending before the Medical Society of Paris. The successful candidate is M. Pierre Lefort, D. M. formerly chief Physician in the Navy Department, but now a resident of this city. No printed copy of this memoir has yet reached me, and I could not with propriety submit it to criticism, although I have been confidentially favoured with a copy of it in M. S. I can, therefore, at present, only say, that a special committee of the Parisian Faculty has reported on this production, and gently reproved the writer for having classed among contagious diseases, without either proof or discussion, many that are not always reputed to be so.* Should this apply to the yellow fever, and were we to judge, from the works I have partly analyzed as evidence in the preceding pages, of the prevailing opinion in France, which admits contagion and no contagion, there is certainly no question of M. Lefort being more consistent in his belief of an absolute contagious attribute, without modification, compromise, and

* Journal général de Medicine, Feb. 1815.

half-way concessions, which are more apt to confuse sound philosophy, and retard the progress of science, than any of the opposite doctrines. The laureat writer, however, disclaims any authority on a subject which he had no intention to treat *ex professo*, but merely as accessory to the task he has performed. Having afterwards occupied an official station in Martinico, he had a better opportunity of observing there many instances of yellow fever, which he candidly acknowledges he never could trace to communication. From previous testimonies of the attainment of controversial talents exhibited by the author in our preceding numbers, we may anticipate, that besides its particular merits, this is the least exceptionable of the recent publications we have proposed to examine, in relation to our subject.

The fourth work, and the worst of all, is the fifteenth volume of the "*Dictionaire des Sciences medicales*;" a work of great celebrity, to which, it appears, all the medical writers of France did, and are still continuing to contribute. Under the letter F we read the article of *Fevers*, and *Yellow Fever*, by Messrs. Fournier and Waidy; and among several inaccuracies and contradictory inferences, we find it calumniously asserted in page 346, that the celebrated Dr. Rush had at first adopted the contagious attribute of the yellow fever; but that, since the year 1802, he had advocated a contrary opinion. He made, however, a declaration when on his death-bed, that, for certain particular considerations, he had defended the latter opinion; but that he had never disbelieved the contagiousness of the yellow fever. Thus, at his last hour, he retracted all that had been written and said by him against it! "We have had this information," says the author of that anecdote, "from very credible witnesses, among whom it suffices to name M. Moreau de St. Mery."

Thus in an instant, and by a few words, is the fair fame of a good and great man destroyed: his character is rated even below that of a corrupt hypocrite, who has made a traffic of the lives of his fellow-creatures. I will, however, Sir, in presence of the people of America, tell the authors of this most infamous calumny, that it requires no refutation, not even before his political or

medical opponents, who, after his death, were observed to be among the first that paid their homage to his talents and moral integrity. But they who, at this late period, wrote such a slanderous anecdote, on the authority of a Monsieur Moreau de St. Mery, ought to have known, that no such person was in Philadelphia when Dr. Rush died, on the 19th of April, 1813; for he left the country before 1800. Do they allude to a bookseller, formerly of Hispaniola, who resided many years in Front-street, corner of Walnut-street, Philadelphia?

Victor Bailly has mentioned the same anecdote in his work, (p. 470) on the authority of a Mr. Pinkard, of London. He ingeniously compares it to the abjuration of Galileo and Fenelon: "The first," he says, "has not altered the rotation of the planets, neither did the other change the sublime morals of the prelate." This is true; and so late an abjuration by Rush would not have invalidated the truth of our doctrine. I beg leave to add, however, for the information of the Editors of the Dictionary of Medical Sciences, that our political and social organization, on this side of the Atlantic, never imposes any shackles on the opinion of men on any subject whatever; we are under no edict that can restrain, bias, or corrupt it; it is left entirely to its intrinsic merit and power, without danger or disgrace. Should any one dare to divert his political opinions from the public good, to deprive his religion of the liberty of conscience, and matters of science or speculative philosophy of his own conceptions, he might be pitied or thought insane; but no persecution, no personal chastisements, would ever follow his steps through life. I must, therefore, call in question the common sense, or the honesty of the fabricators of the anecdote; and also tell the Editors of the Dictionary, that as long as it remains in their pages, it will excite a feeling of indignation, and offend those of their readers who are the friends of honour and justice, and who can feel, that the want of both, and studied envy, could only beget the monstrous narrative, and circulate it abroad.

Besides all these European writers, who, without having examined our arguments and facts, and without observation and sufficient experience, have disregarded

our opinion and doctrines, in order to set up their own as the only guide in matters whereof we should naturally be more competent judges than themselves. I must, for a few moments longer, request your particular attention to a more formal attempt to overthrow, with contempt, all that has been done and said in this part of the world, during five and twenty years, concerning the domestic origin, or the agency of the local and atmospheric causes of the yellow fever; it is a sentence (excuse the expression) passed against us by the College of Physicians of London, and by the physicians of the Army Board; and was, on the 13th of August last, announced in the Evening Post of this city, as "the triumph of *fact* over sophistry!"

"With much satisfaction we present the following decisions of two of the most learned Societies of Europe, on a question deeply interesting to this country, and particularly to this city. We have long entertained entire confidence that the great truth here affirmed would, first or last, be established. It is "the triumph of fact over sophistry."

"*Extract of a Letter from a Gentleman in England, to a Physician in this City, dated June 26, 1816.*

"The decisions of the Royal College of Physicians of London, and those of the Army Medical Board, are at length brought to a close. These two learned and experienced bodies have been for some time past devoted to a consideration of all the facts connected with the nature and character of the yellow fever, particularly as it has of late years appeared in Spain. The College has decided, that the yellow fever is a contagious disease.* The Army Medical Board, at the head of which presides Sir James MacGregor, have also given it as their opinion, that the yellow fever is in its nature contagious; and from the evidence advanced in the writings of Sir James Fellows and Dr. Pym, they further add their conviction, that the fever of Spain is not only strictly contagious, but that, like other disorders of a

* And by consequence an importable disease.—*Ed. E. Post.*

specific character, it *generally* affects the human frame but once. Your experience of the fever, as it has prevailed in New-York since 1795, will enable you to determine how far this last opinion holds good when applied to this pestilence, when imported into your climate. Those who have once had the disorder, are certainly *less susceptible* of its influence a second time. The necessity of a strict adherence to your improved system of quarantine laws, and all municipal regulations for the purposes of domestic cleanliness, cannot be too strongly enforced: on this subject the Royal College and the Army Medical Board are united in opinion. I add no more at present. An abstract of the official documents on these important matters is in my possession, and shall be communicated shortly. I cannot but think it rendering an important service to your country, by giving publicity to the *results* of the deliberations of these distinguished associations. The contrary doctrine, maintaining that different fevers are of one common origin, is so unfounded in fact, and so pernicious in its consequences, that the sooner it is discarded the better it will be for the interests of humanity."

Had the College and the Army Board, like the Congress of Vienna, been charged to settle great political concerns, treaties of peace, claims and boundaries of states, in which all potentates and governments were interested, the above article would have been, from its method and language, well adapted for the occasion. The writer has appeared like an agent or delegate, who was highly gratified with the decision of those supreme arbiters, and was taking an early opportunity to announce to his fellow-citizens the long wished-for tidings of their national triumph and welfare; "for," says the informant, "he cannot but think it rendering an important service to our country, by giving publicity to the results of the deliberations of those distinguished associations." But what is it after all? Why, Sir James MacGregor, Sir James Fellows, and Dr. Pym, with their colleagues, do really think that the yellow fever is *catching;* and so think many of our good folks, wise or not, and many people of learning, and others that care not much for science—old women and all,

who will not thank the College or the Army Board for thinking alike on the subject.

But after the lapse of so many months since the publication of this *important* piece of intelligence, what has become of the *official documents which were to be published shortly?* Are they withdrawn from a public on whom they were contemplated to confer immense advantages?

Setting aside all jesting on the pathos of the writer in the Evening Post, you will no doubt concur with me in acknowledging, that we should all be much gratified to receive, from any wise and learned set of men, or Faculty, useful knowledge and convincing arguments on a subject which has, during twenty-five years, excited and merited their industry. I am sorry, nevertheless, from a few irrelevant circumstances in the London narrator, however *officially* informed, that we shall be obliged to remain where we are. The *first* is, that the *yellow fever of Spain* is only singled out as contagious. This has not any logical relation to the *American yellow fever*, and its *own attributes* are not invalidated. The *second* is, that, like all other disorders of a specific character, the yellow fever affects the human frame but once: to which we may safely oppose, in the scholastic mode, *Nego majorem atque consequentiam;* and therefore they must prove the whole. The *third* is, that we must speedily discard, as an offensive doctrine, that different fevers have a common origin. Now this is indeed killing two birds with one stone, and two much slaughter at once. This last question has nothing to do with the yellow fever, in any point of controversy, except between two disputants who might think alike on the unity of disease: for my part, I do not see why my rejecting the unity of disease would consistently oblige me to renounce my opinion of the domestic or inbred pestilential fever. I am surprised that the College of London and the Army Board should have introduced this subject into their deliberations, unless they intended to condemn all at once any opinion sprung from American medical schools! There is some mystery here: time only will disclose the source from which this clause has originated.

But, Sir, I shall stop here, hoping that my endeavours in asserting the legitimate claim of our opinions and medical doctrines to stand the test of regular controversy, without being overawed either by party writers or illustrious associations, have merited your assent and approbation.

I remain very respectfully,
Dear Sir,
Your friend and humble servant,
FELIX PASCALIS.

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## *Speculative* Remarks *on* Conception. *By Dr.* Aaron C. Willey, *of Block-Island.*

CONCEPTION is a subject which seems to be involved in much obscurity: no theory, unincumbered with difficulties, has ever been advanced to explain this curious and surprising operation of organic life. Many opinions have been formed for that purpose, but none that bids fair to stand, unshaken, the test of progressive inquiry.

The manner in which the semen masculinum is conveyed and deposited in the place necessary for impregnation, has been a matter of controversy from early times: the theory, however, first suggested by the celebrated Harvey, is thought, by many, to be the most plausible and correct. This supposes the prolific portion of the semen to be conveyed into the mass of blood by absorption, and to be carried by the general circulation to the ovaria, where, meeting with one or more mature ova, it enters and performs the process of fecundation.

But this doctrine does not appear to be entirely free from objections. If the absorbed portion of the semen is to be conducted to the ovaria by the general circulation of the system, it runs great hazard of mistaking its course, and of never arriving at its place of original destination.* The chances it has of reaching the ovaria

* Vide Boerh. Acad. Lect. § 674, note 1.

are extremely few, considering the almost infinite number of arterial branches ramified throughout the animal machine. Nature, in this manner, would appear to be thwarting its own designs: nor can we, with any degree of rationality, suppose, that when entered the arterial system, it will invariably pass from the aorta through those branches which lead to the ovaria. This is repugnant to the known laws of sanguiferous circulation.

The notion that the semen is transmitted to the place requisite for conception by means of the general circulation, seems to have originated with that which supposed contagions, and various other substances, to be conveyed through the system by means of the sanguiferous fluid, but which, in this more enlightened age, begin to be justly exploded. Indeed I cannot conceive that any thing extraneous can mix with the circulating blood, without producing serious consequences: it would subject the recipient vessels to the impression of unnatural stimuli, and produce a derangement of salutary action.

But that the male semen *is* conveyed to its destined place, otherwise than through the os tincæ, as supposed by many, may, I believe, be assumed as a fact. The instances of conception in women with imperforated hymen, where the passage of the vagina is obstructed in consequence of disease, and where the os externum uteri has never been punctured by the membrum virile, appears to be incontestible proofs in favour of this opinion: but yet I cannot conceive that the semen ever enters the general circulation; some other passage must exist; some other mode of conveyance obtain. These, in my opinion, are afforded by the lymphatic ducts of the organs of reproduction. I am fully inclined to believe, *that the vital or prolific portion of the semen is taken up by the bibulous mouths of the vasa absorbentia, which open into the fossa magna, vagina and uterus, and is transmitted to the place of impregnation by the inverted action of their corresponding branches.*

This hypothesis is founded on analogy, and certainly appears more consonant to reason than those notions which have hitherto prevailed. That an inverted action of the lymphatic vessels occurs in numerous instances, and in various parts of the system, is generally admitted;

but that it is by this action that the semen is conveyed to the place requisite for conception, has never, to my knowledge, been suggested. I think this a rational conjecture, and offer it for the consideration of physiological inquirers.

In advancing this hypothesis, however, I would not be understood to deny that the semen ever does pass through the os tincæ into the uterus: this has been proved by dissections immediately after coition, and I imagine the case occurs frequently. Indeed this may be conceived a natural consequence in the ordinary conjunction of the sexes, when the mouth of the womb is convulsively thrown open by the extremely delectable sensations and the irritations of confriction. But this I consider as merely adventitious, and not absolutely necessary for conception; and even then, before conception can take place, if it ever does in such cases, the semen must be taken up by the uterine absorbents, and returned or transmitted to the ovaria, or some part of the fallopian tubes, by the retrogressive action of others, and is also probably refined, or suffers some requisite alteration in the conglobeate glands through which it passes in its course.

Assuming this hypothesis as the basis of reasoning, we shall be enabled to explain one cause at least, which renders some women incapable of conceiving: this is the incapability of the genital absorbents to perform their appropriate functions.

We often meet with instances where impregnation does not take place for several years after the connubial union, and where the power of conception is suspended for a considerable length of time. These facts may reasonably be supposed to depend on a temporary torpor of the vessels destined to absorb the prolific portion of the seminal fluid. It is likewise worthy of remark, that with this theory accord the directions given by practical writers to obviate sterility, namely, absorbents and stimuli.

This torpor may be a consequence of the general debility of the system, or dependent on those diseases seated in the uterus and vagina, as menorrhagia, fluor albus, and amenorrhœa.

These absorbents may likewise be rendered incapable of performing their proper actions by causes purely local, and which are frequently beyond the power of medical science to develope. A great frequency of sexual intercourse, however, has been observed to injure the aptitude for conception. This is strikingly manifest in common prostitutes, and is undoubtedly owing to that inaction of the absorbents which must necessarily succeed the great waste of excitability by continued sacrifices at the shrine of Venus.

May not intense desire, or great anxiety to have children, tend to produce sterility, by weakening the system, and impairing the energy of the genital absorbents?

I conceive the male semen to constitute a peculiar stimulus to these absorbent vessels, the effect of which will be in proportion to their state of excitability. Hence women of cold and phlegmatic habits, who, feeling little desire, seldom indulge coition, and in whose genital absorbents there must be an accumulation of excitability, are apt to be more frequently impregnated than those who, excited by venereal orgasm, are continually indulging their salacity.

The semen of some men appears to possess a greater degree of stimulus than that of others: women are, therefore, more liable to be impregnated by indulging the embraces of one man than another.

Dr. Ewell thinks that oxygen is essential to conception.* His ideas are ingenious, and worthy of attention. This vital principle may promote impregnation two ways. In the first place, by dissolving the semen, as that gentleman suggests, and thereby rendering it more ready to enter the absorbents; and, secondly, by assisting to stimulate them into requisite action.

Before dismissing the subject, it may not, perhaps, be improper to offer a few remarks respecting the two following controverted questions, which sometimes occur in the department of jurisprudence, as well as physiology:—

1st. Can a woman conceive when she receives the male semen during sleep, and without her knowledge?

* Med. Rep. Hex. II. vol. iv. p. 130.

2d. Can impregnation take place when the female is forced to the Cytherean embrace?

In each of these questions I contend in the affirmative, and for the following reasons:—

1st. I do not conceive that pleasure in the female is so very necessary to conception as is generally supposed: it appears to be implanted in both sexes merely for an incitement to employ the means requisite for the propagation of the species. But conception may as well take place without any pleasurable sensation, as when the feelings are wrought to ever so high a degree. There are some women of such peculiar temperaments, that they are not sensible of the least oblectation in the venereal congress, and who submit to the conjugal embrace, rather as a duty than from inclination: yet, in general, these conceive much more frequently than those who glow with all the ardour of concupiscence. The fear of conception sometimes prevents the sensations of delight which would otherwise, perhaps, be enjoyed by those unhappy girls who are unwarily betrayed into the embraces of the seducer; yet, in such cases, impregnation has been known to be the result.*

2d. The process of conception is performed independent of volition. This is evident, from its occurring in those in a state of celibacy; in the married, who are guilty of adultery in the long absence of their husbands; and in those who have a strong dislike to having children.

If neither pleasure nor volition are concerned in the promotion of conception, what hinders its taking place when the seminal fluid falls upon the female organs of reproduction during sleep, or even in spite of the utmost struggles and opposition? But neither sleep nor the opposition of the will can suspend the operation of those laws necessary for the conservation of animal existence: the blood continues to circulate, the glands to secrete,

* The fear of conception is, perhaps, the very cause which tends to expedite it. Fear promotes absorption in the lungs, as has been proved by Darwin and Rush; on the surface, as is demonstrated by the paleness of the skin; in the kidneys, as appears by an increased flow of the urine; and, from analogical reasoning, we may suppose that it promotes it in the genital absorbents.

the stomach to digest, and the absorbents to imbibe, whether we are asleep or awake, whether the will approbates or dissents with the utmost struggles of opposition.

## REMARKS by the EDITORS.

We are, for the first time, gratified, in this new series, with a satisfactory explanation, as far as it goes, of the phenomenon of conception. We believe, with our worthy correspondent, that it is principally accomplished by an organical system of absorption, not merely local, and much less exclusive to the uterus itself, but which can be effected from any part of the mucous membrane which interlines the female parts of generation. We now object only to the supposition of a simple and mechanical action here represented to take place, without the agency of moral and physical causes. That, for very important and wise purposes, it has been quite differently intended and provided for by nature, we must be allowed candidly to suggest. Furthermore, we would not advocate, in medical jurisprudence, the inferences preferred by the author, and which, however well deduced from his hypothesis, stand now in opposition to the great authorities of Zacchæus, Fœderé, and Mahon. There are auxiliary agents in every organ appertaining to each function of animal life, or certain alterations of parts and fluids, without which their operation would be but imperfectly accomplished; and, even in the exercise of our senses and physical faculties, we observe a consentaneous connexion with other organs, or with the whole frame. When hunger stimulates the stomach, at the sight of aliments the salivary glands profusely irrigate the mouth and pharynx; a dazzling light will create sneezing; pungent odours will draw tears; and a terrific noise will suspend the motion of all the voluntary muscles. In the brute creation itself, generation is provoked by effluvia from the female; while, in the human species, it is subordinate to moral causes, to an association of ideas, of attractive appearances and sympathies, which are best calculated to irritate the wants of nature, and to call for its operations. In a physical

point of view, the organism, or orgasm of that function is already known to be so much under the control of age, idiosyncracy, habit, and diet, that, on the other hand, it would appear inconsistent to admit its operation, independently of any auxiliary agency, even without the participation of the will, or in an absolute state of sleep. We are aware of facts which have been adduced to prove that either of these two conditions, or states of body, are not incompatible with the act of generation; but these may be explained, when we observe, that if the first, or the will, be not concurring at the beginning of an attempt, the struggle itself is of such a nature and tendency as to subdue it entirely at its ultimate stage. Sleep also should be well defined: it may be absolute or not. It is known that a state of reverie, of dreaming, or of coma, under the operation of disease or soporific agents, is not incompatible with the act of generation, nay, it may provoke it so far as to be often the means of frequent and exhausting attempts! As for those mysterious laws of nature which seemingly favour conception, even without effort and by simple contact, and also through obstacles of mal-conformation, if we mistake not, far from excluding the consentaneous action of the system, will more evidently establish it, if the following natural circumstance and physiological law, which is generally unnoticed, be well understood in its cause as well as application.

Sed nunquam solo ingressu maris efficitur conceptio, absque absorptione utrius sominii per feminæ systema vasculare partium sive nympharum, oris tineæ, sive totius vaginæ. Illud enim observandum cujusdam viscidi liquoris copiam, hanc effundere, priusquam aggrediatur arrecto siccoque membro virili; quique faciliorem et rarissimè cruentam adjuvat intromissionem. Deindè delectabili conatu, ejicitur maris semen, miscentur imbres, mirabile dictu! Subitò absorptionis haustu exsiccantur; intentique amantes ora tenent, sed defessi paulatim ab amplectu recedunt, atque fit conceptio.

Hinc indè putamus muliebrem liquorem hactenùs maris vehiculum esse, eodem modo quo glandis prostatæ inermis humor *sperma* pervehit per masculum urethram. Eorumdem commixtio perficit faciliùs virilis seminis

haustum ad imum usque fecunditatis thalamum: quia muliebris liquor ad instar amici custodis servat admissum semen ad natalem aditum quod vocant ovarium.

Hisce præfatis concludimus meretrices quàm rarissimè concipere possunt, quas crebræ libidines atque fricationes orbant humore quem ad captandum atque diluendum hominis semen, mulieres solent effundere. Quam ob rem etiam ipsimet conjugales congressus inanes evadere possunt, si desit fœminei effusio liquoris, aut si tardior maris aut citior profluvium fit ejusdem; atque utrius imparitate seu deformitate partium, impeditur commixtio, disjiciuntur liquores; nullaque fit absorptio inhiantibus poris.

Paucis verbis, hos sine ambage, damus *aphorismos*.

1. Absque muliebre liquore, inane est virile semen, tantumque partes inquinat; abest conceptio.

2. Cumque mulieris ad prolem apto liquore, ad os ipsiusmet vaginæ si tangat nymphas liquor seminalis, fiunt commixtio et absorptio; adest conceptio.

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**Report** *to the Medical Society of Emulation of Paris, on the best and most approved Mode of* **extirpating** *the* **Arm** *at the* **Shoulder Joint**. *Translated from the Journal de Medicine of May*, 1815, *for the Medical Repository. (With a Plate).*

THIS report is made by Messrs. Ribes and Gaultier de Claubry, to an Institution, in which controversies on medical and surgical matters, and all important discoveries, are regularly examined and discussed. This tribunal, composed of the eminent members of the Faculty of Paris, critically analyzes communications addressed to them; passes judgment, after reports of committees, for admission and rejection; and also rewards correspondents, and distinguished authors, by the academical admission *in gremio*. A monthly bulletin of these transactions is published in the various journals of medicine in Paris.

The nature and object of this respectable association, than which none could be better calculated to promote

medical science, we wish to represent to our readers as it is, entirely divested of formalities, or of privileged distinctions of rank and academic degrees, among the individuals who compose it, and who are pledged to unite together with the sole motive of emulation in the promotion of the healing art. It is supposed, that whoever is willing to contribute with them to that grand object, is already sufficiently qualified for public confidence, or must look, in other institutions, for titles and honours, by which he may wish to be distinguished. With this explanation, it will be easily supposed that the authority of the Medical Society of Emulation of Paris commands, in their deliberative decisions, a degree of respect the more imposing and weighty, as it cannot be subservient to any other purpose than that of stimulating merit and advancing the public good.

Some disagreement on the best mode of extirpating the arm at the shoulder joint, had, it seems, excited a warm controversy between several army surgeons. M. Emery, D. M. P. and chief Surgeon of the Imperial Guard, was opposed to two others, with a printed memoir on the operative process of Baron Larrey, which he describes as being the most easy and perfect for securing the success of this important operation. The reporters dwell much on the arguments of Dr. Emery, to whom they attribute a superiority of judgment and practical field experience, and then solicit for him the honour of admission as a member of the Society of Emulation. The reception of the report, and publication of the bulletin, remain, therefore, like oracular evidence in favour of the surgical operation, as devised by Baron Larrey, for extirpating the arm at the shoulder joint.

This official document states, in the first place, that cases of injury or disease, which, for the preservation of life, render it necessary to resort to so great a mutilation, were formerly imagined to be irremediable by an operation. Indeed, how could the flow of large streams of blood be checked during the operation, and effectually stopped after it? The vicinity of the heart was another objection, and also the retroceding influx of blood into the circulating system, as their formerly prevailing phy-

siological theories would leave it to be apprehended. But the most powerful obstacle was found in the exaggerated opinion of the danger or incurability of a wound penetrating the joints. In spite of all these discouraging notions, two celebrated surgeons, Ledran and Morand, performed, with success, the extirpation of the limb; and, for the first time, it was hoped that the art of surgery might be enriched with a new operation, and a means of saving life. The process hitherto taken was therefore examined, and found to be very defective, and was accordingly improved anew by other surgeons, as Garangeot, Lafaye, Sharp, Bromfield, and others; but the operative mode of Lafaye was principally adopted as the best. In it, however, the famous Desault, who was, thirty years ago, at the head of the surgical profession in France, absolutely rejected the making of two transversal flaps over the joint, one superior, by means of the deltoid muscle, and the other inferior, with the auxiliary integuments; which being necessarily stretched up to a great bulk, and badly adjusted over the largest diameter of the glenoidal cavity, must form a pouch for matter, and create many serious accidents. Therefore, with a truly surgical genius, he devised the formation of two longitudinal flaps from the deltoid, which would naturally be better adapted on the smallest diameter of the glenoid cavity, and avoid other foreseen dangers. Happily M. Larrey exercised his mind among his pupils, while he was entering the most extensive field of observation and practice, in numerous armies, and during uninterrupted campaigns, for the space of twenty years: he minutely considered every possible point of danger in this operation, and, on the principle of the longitudinal flaps, he rendered it so simple and safe, that the danger of hemorrhage cannot present any obstacle to it. This operative process is also universally adapted to the variety of cases and injuries from fire-arms, &c. that require the extirpation of the limb. We shall now describe it.

The patient being conveniently seated, the operator makes an incision from the edge of the acromion down to an inch below the neck of the humerus. By it he divides the skin and the fibres only of the deltoid into

Four different Positions of Baron Larrey's Process for Extirpating the Arm at the Shoulder Joint.

*Fig. 1*

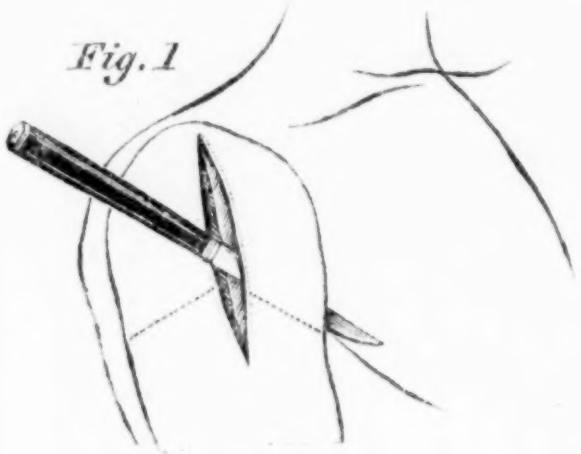
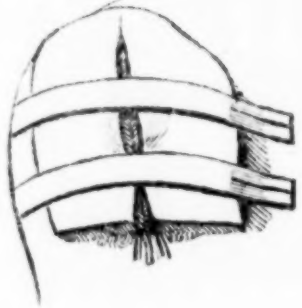


*Fig. 2*

*Fig. 3.*

*Fig. 4*



To face page 345.

two equal masses. While, with the help of an assistant, the skin of the arm is gently drawn up to the shoulder, he plunges a knife into the upper part of the wound, laterally, and in the direction of either of the angles of the arm-pit, thereby avoiding to touch the brachial artery, and then draws it outwards, obliquely, and downwards: consequently he divides, on one side, the tendon of the great pectoral muscle, and, on the other, that of the great dorsal. (Vide Plate, Fig. 1.) The two flaps are now formed, which, in order to be raised, must be dissected or detached from all cellular adherences underneath, reversed, and kept up by an assistant. By a third incision circularly made on the junction of the humerus to the scapula, from back to front, or *vice versa*, the capsula and ligaments are easily cut apart; then pressing upon the elbow, or turning it, the head of the humerus is observed to be luxated, while the knife divides the bundle of its anterior integuments to both angles: running the knife into the back of it, and downwards, he in like manner divides any remaining ligaments or tendinous appendage. It is now time to attend to the blood which is confined by compression on the brachial plexus, or behind the clavicula,* and to divide the whole of the posterior bundle of soft parts exactly from angle to angle of the flaps. The extremity of the extirpated arm remains as in Fig. 2, and the trunk as in Fig. 3, to which the necessary ligatures have been already applied.

Fig. 4. exhibits the shoulder perfectly closed up by the longitudinal flaps, with the ligatures collected in the middle line of junction, and over the transversal incision below the armpit; the whole to be secured by two or more transversal adhesive strips.

Numerous are the operations which have been performed in this manner, with unparalleled and almost incredible success, even in the proportion of at least ten to one. The mode is easy, and simple in execution;

* A middle-sized key, wrapped at the end with soft linen, pressed and steadily held behind the collar-bone by an assistant, will effectually intercept the subclavian artery, and afford to the operator a great conveniency, and time for successively applying all necessary ligatures.—*Edit.*

and the adhesion of parts is the more rapidly obtained, as the flaps are muscular, and more susceptible of adhesive inflammation than the skin alone. It may be observed, that, in the chapter of diseases only, and beyond the destructive scenes of war, cases are very rare wherein the extirpation of the arm has become necessary; yet we have good grounds for asserting, that in many instances of long standing, caries takes place at the elbow, or a general state of atrophy pervades the arm, and shortly exposes the humerus to an undefined state of disease, with or without caries, which renders the ordinary amputation entirely useless, and hastens death, which, by the extirpation of the limb, would have been avoided; and in similar instances we have, more than once, given our prognostic from facts, and regretted that the above operation had not been preferred.

# REVIEW.

*A Treatise on* SURGICAL DISEASES, *and the Operations suited to them. By Baron* BOYER, *Member of the Legion of Honour, Professor of Surgery of the Faculty of Medicine of Paris, Principal Adjunct Surgeon of the Hospital de la Charité, Member of several National and Foreign learned Societies, &c. &c. Translated from the French by* ALEXANDER H. STEVENS, *M. D. Professor of the Principles and Practice of Surgery in the Medical Institution of New-York, and of Queen's College, New-Jersey; one of the Consulting Physicians of the New-York Dispensary, &c. With Notes, and an Appendix, by the Translator.* 2 vols 8vo. pp. 835. *T. & J. Swords, New-York.* 1815.

THE medical profession in the United States has many votaries, and is distinguished by numerous eminent characters. The schools in the different branches of the healing art, progressively and annually increase in the universities of New-York, Philadelphia, Boston, Baltimore, and others of less note: their students, however, suppose, that their respected masters and teachers, to acquire skill and a high degree of eminence, have been previously obliged to visit the great colleges and anatomical theatres of England, France, and other countries. With a very few exceptions indeed, it is a fact, that most of our distinguished Professors and Surgeons have sought for Transatlantic attainments; and no doubt many have done so with advantage to themselves: yet many others, we believe, have not returned much wiser for their foreign excursion. But who would believe that on those ancient shores, notorious for wars, calamities, crimes, struggles for power, and the abridgment of human happiness, the mind can be more readily improved than in this

country, where all the elements and materials of knowledge exist in abundance? We would therefore inculcate in the mind of the rising medical generation, that there is no occasion or necessity for them to desire better opportunities, at least what are indispensably necessary, than those which are daily offered to them in this country. Let them diligently attend their various lecture-rooms—our extensive hospitals; let them turn to their own profit the good books, and all important European works, which are soon edited and circulated in this part of the world, and they will be convinced, that very little more remains in the old world, for their improvement in any scientific branch, than what has been brought to their own doors, and which domestic industry and native talents may not improve and extend among them, perhaps to greater benefit and advantage.

We were led to these observations, by perusing the excellent book of "Boyer's Surgery," lately translated by Dr. Alexander H. Stevens, of this city. The history of that great surgeon still more loudly bespeaks the truth of the observation we have just made on the importance of youthful emulation and industry, the attainments of which may sometimes surpass all those of a literary, classical, or improved plan of scientific education; for, of these opportunities, none were provided for Boyer—he never received any.

He was born at Uzerche, in the department de la Coréze, of poor and obscure parents. At the age of fourteen or fifteen, he was put an apprentice to a surgeon of his little town, with whom his principal occupation was that of putting up medicines, carrying them about, and bleeding patients. He obtained such a renown in this last popular and frequent operation, that he became the sole blood-letter of many little villages around. After three years of this very limited practical instruction, he turned his hopes of a better destiny to Paris, where he could be permitted to attend a gratuitous course of surgical lectures. To provide, however, for his board, he hired his services, and a great part of his time, to a hairdresser and barber, which many surgical students, at that time, did not feel

ashamed or disgraced to do. With small perquisites he soon fitted himself for attracting the notice of the royal Professors, who found him worthy of being admitted a pupil in dissecting-rooms, where he succeeded in rendering himself useful to his masters, whom he supplied with elegant anatomical preparations. Of these he used to keep many in readiness for students and rich purchasers; he once disposed of a complete set for several thousand dollars. With as much proficiency in his art as in his pecuniary circumstances, he not only opened a repeating class of the general lectures of the School of Surgery, but he undertook private courses on Osteology. Through these various progressive steps he aimed at an eminent rank in the practice of surgery, as soon as he became entitled to his surgical mastership, by his services in the Hotel-Dieu, under the tuition of Deschamps, Sabatier, and Dessault. For, after having commenced as a dresser in this Institution, he was rapidly promoted to the second office of Surgeon in the Hospital de la Charité; and finally, he associated, in private practice, with all the eminent surgeons of the metropolis of France: furthermore, at the new organization of the Medical and Surgical School, he succeeded to the chair of Deschamps, as Professor of Clinical Surgery. It is very remarkable, that his first pupils were all those who have since obtained and kept the greatest celebrity in surgery; such as Depuytren, Roux, Richerand, &c. The last published, as the result of the lectures delivered by Boyer, an elegant and useful treatise on the Diseases of the Bones. We are informed, that, a few years since, he retired from all the public avocations of his Professorship, to the great regret of every friend of humanity and science.

Boyer had been elevated to the high station of first Surgeon of his sovereign Napoleon, whom he followed during his campaign in Prussia: he was also presented with the insignia of the Legion of Honour, and created Baron of the Empire. But these distinguished honours cannot be so durable as the celebrity of his instructive works. The first is a complete Treatise on Anatomy, which is, in France, preferred to those of Sabatier, Heister, and Winslow: the other is the present Treatise

on Surgery, the latter part of which, we are happy to hear, is at last accomplished.

It is said, that, amidst his scientific pursuits, Baron Boyer did not neglect his temporal affairs, and that he is possessed of an immense estate. This circumstance, however, is mentioned with the view of introducing the fact of his gratitude to the young female, his laundress, who assisted him with her small savings during the period of his poverty: he rewarded her with his hand and fortune. This generous disposition is heightened by a pleasing countenance, spirited features, amiable and engaging manners, and great urbanity. In other respects, he is less refined and improved in literary and auxiliary sciences, than might be supposed of a man so deservedly celebrated.

At an advanced period of life, he was obliged to descend to the scholastic and classical study of the elements of ancient languages, without which he could not use his pen with a masterly hand; and he has partly succeeded.

These, and other little deficiencies, form a contrast with the most profound and correct judgment, and with as many experimental observations as, of themselves only, might create anew the science of surgery.

The translation before us is the first part of the pathological plan, which embraces all diseases appearing on any part of the body: the second treats of those diseases which may be considered as peculiar to any particular organ. We sincerely hope that our industrious translator may find himself so far encouraged in his undertaking, as to be enabled to pursue the execution of the whole. The task no doubt has been hard, when it is considered that Baron Boyer is neither a pure nor a perspicuous writer, and is frequently inelegant, which circumstances must considerably increase the labour of a correct translation. Dr. Stevens has omitted several paragraphs, the substance of which could be found in other parts of the work. The articles on Aneurism are treated with much freedom: whole pages are omitted, not of speculative opinions exclusively, but of historical cases of operations and treatment conducted after the manner of the French school. "It is hoped," says the translator, in a note, "that these omissions will be

amply compensated by the interesting details in the Appendix." He has also enriched this American edition with many elegant plates, and with notes at the end of each volume, which are equally critical and instructive. In one of them (Note G.) the translator gives a long extract from Mr. Jones's valuable work on Hemorrhage, "for a better exposition of the futility of the practice of the French surgeons on diseases and wounds of the arteries." This surgeon, however, is rather more complicated and lengthy in his indications of a ligature of arteries than Boyer. The above observations will perhaps apply better to the Treatise on Hemorrhages by J. Lordat, D. M.

In the present treatise, the reader is not to look for minute elementary instruction, according to the usual modes in the beaten track of clinical practice, and which would assimilate it to a great number of English and French works of the kind. Boyer did not write for men who are not yet sufficiently tutored, and who would never open his book, except to discover what is to be done in a case of emergency. They would not probably find him a convenient guide, nor always a very intelligible one; for, instead of attending to a system of gradual progress for his reader, in order to bring him to his doctrines and opinions, he seems rather to write in obedience to the impulse of his mind, genius, observations, &c. and adhering to no other method but that of compleating his subjects, he is sometimes very obscure. His condensed and unexplained propositions are incomprehensible, unless they have been already felt or adverted to by the reader. Thus, in his chapter on Inflammation, he says, that "heat, redness, inflammatory tension, announce an augmentation of *the vital powers*, and the organic action of the capillaries." Now this augmentation of *vital power* is certainly a great problem: if it mean an increase of sensibility, we acknowledge it; but, on the other hand, the patient surely is debilitated, &c. Again; "it is of great moment," says he, "to determine, if an inflammation arise from an internal or external cause; because it would be as injurious to interrupt the progress of the disease in the former case, as to promote it in the second." Here we

meet with another difficulty. Must we not oppose the rapid progress of a pneumonia, or of a nephritis? Yes; we may abate the symptoms, but we surely would do wrong to counteract the critical or hippocratic protraction of nine days. Any other internal cause of inflammation, if from injury or wound, must be treated as the other. We beg leave to introduce another. "Pain is one of the principal phenomena of inflammation, it is often the only one by which internal inflammations are discovered: nevertheless, every internal pain does not arise from inflammation; for the nervous colic is not an inflammatory affection." Granted; but Baron Boyer admits the delitescence or metastasis of inflammation, which may all at once change its seat. For the same reason, will not nervous colic take place, and the inflammatory action be somewhere else in the alimentary organs?

The manner of Boyer, in composition, is therefore entirely his own. He seldom refers to authors for authority, but only to correct or improve their opinions; because he is satisfied to model his lessons by his own judgment, according to the most minute anatomical and physiological laws, and the results of his practice. The reader is always sure to find something new, or something to discuss in his pages, and which is laid down with a great characteristic candour, without the ill humour of a John Bell, or the puffing bombast of a great many others.

For a more satisfactory illustration of these delineated traits of the French Baron, we refer our readers to his other chapters on *Gunshot Wounds*, on *Fungus Hematodes*, on *Scirrhus*, on *Cancers*, on *Ulcers*, on *Spontaneous Luxations*, and on *White Swelling*.

To give another idea of Boyer's work, we must be permitted to lament a certain want of freedom of thought and opinion, in elementary books or treatises, relative to our art. It is a fact, that almost every writer of the kind confines himself too much within an approved creed of doctrines—a rigid course of practice, the best calculated not to excite opposition or censure. Moreover, as a treatise is most likely intended for the rising generation, authors take care lest a preponderating authority

in the schools should explode novel systems, or perplexing theories, that might be subversive of their own. How far such a restraint operates on the genius of many who have devoted much time to observation, and who have perhaps luckily met with facts and means calculated to unveil great mysteries in nature; or how much the science of physiology and human diseases is retarded and still deprived of the ultimate and desirable progress which may be obtained, we will not undertake to prove and explain; but if there be such a restraint among medical and surgical writers, the consequence must evidently prove injurious to their science. Now we will apply to Boyer quite a different disposition, and a perfect freedom of opinions, notwithstanding their novelty or singularity; being happy, as it were, to excite controversy or discussion, to meet with arguments and opposition, to create new thoughts and doubts, and even to reject whole chapters of known and established authority. We certainly would not take part with him in all his opinions, neither would we decide against him, being aware ourselves of the innumerable chasms in our art, which still remain to be filled up with better materials of genius and truth than those which we possess.

Boyer defines canine rabies as "a nervous disease, which produces an alteration of the saliva, by which the bite of a rabid animal communicates the disease." Certainly this is the reverse of all our authorities on the subject; that is to say, this kind of poison produces the nervous disease, &c. Yet, which of the two assertions is the best? We must decline answering; we would rather be interested judges, after the doubts we have expressed thereon, in our preceding volume, page 30. He says also, that "the above is not the only way in which the disease may be communicated; that authentic cases prove, that the slaver of a rabid animal, applied to an excoriated part or thin epidermis, may occasion rabies." From this proposition we are induced to believe, that not only the slaver of a rabid animal, but any other of its poisoned or putrid fluids, may create the disease, as is evinced by authentic cases recorded in this number.

On the subject of denuded bones, this French surgeon absolutely rejects every thing that has been contrived and proposed to promote exfoliation; stimulants, caustics, cauterization, perforation, every thing—except simple poultices.

In the case of scirrhus occasioned by a syphilitic or herpetic affection, he advises "inoculation with the repelled disease." This mode would probably create new external symptoms, and, by their influence, promote the resolution of the scirrhus. Baron Boyer tells us, that "the arteries, the extremities of the rectum, and the pylorus, are among the internal parts most exposed to cancer," &c.

These, and many other singularities, cannot fail to induce inquiries, doubts, and wonder; yet, whether true or not, they deserve to be considered, since, to a man of the superior judgment and experience of Boyer, they have appeared well founded. Thus, having improved what the French call "*la haute chirurgie*," high surgery, as is evinced by his apparatus for the fractured femur, the patella and clavicula, we may safely affirm, that he has not been surpassed by any professional surgeon since Ambrose Paré, in originality, importance, and universality of practical observation, which only can constitute the scientific art of surgery, and create the skilful operator therein.

There are deficiencies and some faults in this first part of Boyer's work; particularly one in his chapter on *Burns*, in which he appears totally ignorant of one of the principal causes which aggravate that kind of injury, since he has omitted to lay down the indications, and the remedies that can best counteract its worst consequences. Indeed, it is not so much by destroying or disorganizing the part on which heat is applied, that we are to consider it as injurious; it is by a peculiar morbid state into which it throws all the adjacent parts, and which are deeply seized and penetrated by it, without being disorganized. It has been suggested, that that morbid action is like an excess of stimulus locally capable of suspending the functions of vitality and circulation, and of causing the death of the parts. This has been justly compared to another morbid effect occa-

sioned by frost, and which, by gradual diminution, is perfectly removed, and the parts restored to life. It has therefore been concluded, that warm and stimulating applications on burns, would arrest any dangerous progress of the injury, and always reduce it to a local and superficial disorganization, if the heat applied has effected it. Experimental applications, according to the method of Mr. Kentish,* have satisfactorily justified the truth of this new pathology, which, however, requires a prompt and vigorous use of spirits, turpentine, &c.

Baron Boyer has also included in this treatise, whole chapters on *Erysipelas*, on the *Œdema of Puerperal Women*, on *White Swellings*, and other subjects, which, we humbly believe, he could not improve, as surgical diseases, and would be more correctly classed among internal or medical maladies. He has, however, amply compensated for these imperfections, by his last and novel subject of certain deformities, produced by derangement of the natural relations of the articular surfaces of the bones, coming on gradually, and without external violence.

With much respect for the translator, we take leave of the work, returning him our thanks for his undertaking and labour; expressing also our desire of being speedily favoured with an American edition of the second part. At the same time we earnestly recommend Boyer's Surgery to all medical and surgical practitioners.

* Vide Med. Rep. vol. iv. p. 80

MEDICAL SKETCHES *of the* CAMPAIGNS *of* 1812-13 *and* 14; *to which are added, Surgical Cases, Observations on Military Hospitals, and Flying Hospitals attached to a moving Army. Also an Appendix, containing a Dissertation on Dysentery, which obtained the Boylstonian Prize-Medal for the Year* 1800; *and Observations on the Winter Epidemic of* 1815-16, *denominated* Peripneumonia Notha, *as it appeared at Sharon and Rochester, State of Massachusetts. By* JAMES MANN, *M. D. A. A. S. Hospital Surgeon of the Army, &c. &c.* 8vo. pp. 317. *Mann & Co. Dedham.* 1816.

MEDICAL narrations of military campaigns are a valuable class of publications; they supply the defects of the statements usually made by commanders and historians; they inform us of the diseases in an army, frequently more destructive than the sword of the enemy; they instruct us how raw recruits gradually become inured to the service of war, or perish in the seasoning: from them also we learn the reigning distempers, with their symptoms and treatment; and we gather from them, at the same time, the accidents of the field and the camp, together with the proceedings in the hospitals and other receptacles for the sick, the disabled, and the wounded.

The name of the author has already been often impressed upon our pages: he is well known by his ingenious and respectable publications. He appears to have been one of the most active members of the Medical Staff. He has enriched his own observations by the communications of several of his professional friends; such particularly as surgeons Huntt, Lovell, Fuller, Whitridge, Purcell, and March. From these sources proceeds the present work, which is inscribed to the late Commander in Chief, General Dearborn. The information it contains relates chiefly to the New-York frontier, on the northern and western parts of which Dr. Mann was principally employed during the war.

The author's first sketch treats of the campaign of 1812. The wet season, the exposure of military life,

the raw condition of the soldiers, and the incidents to the situation of new recruits, concurred to excite dysentery and diarrhœa, the usual concomitants of armies. To these supervened intermittent fevers, rheumatisms and measles. Pneumonia, or inflammation within the breast, presented itself in formidable array. Its prominent symptoms were, pain in the chest; in some cases one side, in others both were affected; short and difficult respiration; dry cough; the pulse of those whose condition was most alarming, was small and hard; the heat of the body and extremities not above the standard of health, sometimes below. The above symptoms, with diarrhœa, which in a few instances attended, seemed to forbid the use of the lancet; but subsequent practice, he observes, justified its use. He makes a distinction between the winter epidemic of 1812–13, among the troops, and the spotted fever of several preceding winters in the north-eastern districts of the Union. In spotted fever there was mental derangement in the greater number of cases; whereas in the pneumonia, that symptom never appeared in the beginning, and seldom in the advanced stages. But notwithstanding this variety in the disorders, he thinks the exciting causes may have been similar. It appeared both in the sthenic and asthenic forms. The author describes, like an accurate observer, three modes of this serious and frequently fatal disease. The stimulant treatment of brandy, wine, and soups, is represented as having been unsuccessful, and deadly to an alarming degree. The beneficial effects of discreet and seasonable venesection, cathartics, sudorifics, with antimonials and mercurials, are particularly stated, p. 27. He condemns the admission of ardent spirits into a soldier's ration: he recommends the wearing of a flannel shirt next to the skin; with a variety of other remarks: but many of these are already recorded on our pages, in the history of the epidemics of that year.

The campaign of 1813 furnished another succession of fluxes, dysenteries, and fevers of the intermitting, synochal and typhoid types. Of these he investigates the causes, (p. 73); and after a detail of practical remarks, proceeds to describe some of the dreadful con-

sequences of calomel injudiciously prescribed. These were mortification of the intestines, caries of the jaws, and destruction both of the muscles and bones of the face. In such cases, every alarming symptom was increased by cold.

In recent cases of lues, Dr. Mann testifies that the muriate of gold, a remedy first announced in America through our work (Med. Rep. vol. xv. p. 197), was employed with the best effect, without the unpleasant salivation produced by quicksilver. The fatality consequent upon the mal-administration of the antimoniated tartrite of potash, is instructively told. (P. 89.)

Dr. M. occasionally departs from the straight or strict path of the profession, and indulges himself in topographical descriptions. They add materially to the interest and value of his book. The march of the troops from Greenbush, by the route of the Mohawk river, to Sackett's Harbour on Lake Ontario (p. 47–56), the description of the Niagara frontier (p. 97—105), and that of the Lake Champlain and the Lower Canada border (p. 168—174), are pleasing examples of his talent in this way. They would embellish the pages of a work on civil history or geography; and would well become our own, had we room to insert them.

During the campaign of 1814, he bears strong testimony in favour of the nitrate of silver given in the form of pill, to the amount of the eighth of a grain, every six hours, as a remedy completely triumphant over epilepsy. (P. 1 9.)

To the deleterious operation of the acetate of lead administered internally, as already printed in our work, (Med. Rep. vol. xviii. p. 64), on the authority of Hospital-Surgeon Huntt, Dr. Mann mentions two cases of colica pictonum caused by the same saturnine remedy, one of which terminated fatally, and the other, after a hard struggle, in a recovery, (p. 136). The muriate of gold was administered with excellent effect to hospital patients labouring under confirmed syphilis, and upon whom mercurials, tonics, and diet-drinks had been tried in vain. (P. 141).

Fair examples of Dr. Mann's manner of penning military sketches, may be found in p. 57, where he de-

scribes the capture of York in Upper Canada, during the spring of 1813, by the United States forces under General Dearborn; the action at Fort George, at Niagara outlet, shortly after, by the troops under General Scott, p. 61; the expedition down the river St. Lawrence, in the ensuing November, under General Wilkinson, p. 118; and the repulse of the enemy at Plattsburgh, under Commodore Macdonough and General Macomb, p. 146. in September, 1814.

We insert the author's concluding observations on the health of soldiers and the strength of armies:—

"Many casualties concur to enfeeble a soldier in the field; some of which have, in the course of these sketches, been noticed. When a man is animated with the object which duty urges him to accomplish, if his health is firm, and not rendered inactive by old age, he will endure extreme fatigues, and severe colds, when time is given him to take his common rations at seasonable hours. Long abstinence, watchings, and unremitted hardships, soon break down not only the spirits, but strength of an army. But when well fed, they cheerfully endure fatigues, colds, and expose themselves to the most threatening dangers, regardless of consequences. Familiar with death, the soldier soon forgets that the feeling of horror was once attached to its name. The love of country, honour, the pride of conquest, incite him to acts of heroism. When duty calls to confront the enemy, he obeys the summons with the same alacrity, as when invited by the alluring voice of pleasure to his amusements. Under these strong excitements, with a due proportion of nutriment, disease seldom assails the body. During long intervals of inactivity, the system becomes enervated. Then it is that the deleterious agents exhibit their influences upon animal life; then it is that an army sickens from causes connected with their local positions. The soldiers are attacked with diseases in the field, which originate from their own filth and imprudence. In city cantonments, additional causes co-operate to enfeeble not only the body, but mind, productive of sickness and military apathy. During periods of active service, intervals of repose are necessary; but they should be short, and,

during rest, unexposed to rain or snow. Profound sleep is increased by fatigue; during this state, the powers of life are either weakened or suspended. The cutaneous secretions are diminished in proportion to the waste or evaporation of caloric upon the surface. The circumambient moist atmosphere favours the process, while diseased sensibility assumes the place of health. The sensations of cold and rigors succeed, with obstructions of the capillary vessels upon the surface; which derangement, by a sympathetic association of parts remote from each other disorders the more immediate organs of life. Hence arise fevers, rheumatisms, dysenteries, and diarrhœas—diseases, the forms of which are governed by the incidents of positions, or local causes, and seasons.

"It is therefore favourable to the soldier's health, after a hard march, to be obliged to seek or cut his wood, to make a fire, and cook his provisions. By this gentle exercise a suitable action is preserved upon the several organs, while the perspiration on the surface is gradually evaporated, without the too sudden waste of heat; the powers of life do not sink, and are further supported by his soup, and a short period of rest. He rises refreshed, and is prepared to obey commands.

"There are two principles which are necessary to form the efficient soldier. The first is a rigid military discipline, which operates on the mind of man with a force superior to the strongest apprehension of dangers. It is this which constitutes the courage and bravery of European armies, who have no object in view but to obey the commands of their superior officers. They fight the battles of a prince, without knowing whether the cause in which he is engaged is founded upon principles of justice; or whether he is actuated merely by capricious motives. Their soldiers, no ways incited by objects which they can appropriate to themselves, are but machines, while the courage which they possess is wholly artificial.

"But there is a second principle which renders a man brave; a knowledge that he possesses a native property—liberty, independence, and a right of soil. These he will support and defend without compulsion; in defence

of these, he instinctively assumes his arms, and becomes a soldier. Added to this last principle the discipline of Europe, the armies and fleets of the United States have rendered themselves irresistible; and thus they will continue to be, while the principles of our government remain unimpaired, and the pillars of our federated constitution stand firm."

The dissections of bodies destroyed by peripneumonia notha, related in one of the notes subjoined to the sketch of the campaign of 1814, furnish additional facts concerning the infarcted condition of the lungs, their adhesions to the pleura, the quantities of liquid and coagulated lymph in the pericardium and thorax, and the deep and complicated disorder about the vital organs, which characterize that fatal malady.

During the examination of one of these cases, there was a very curious occurrence. It deserves to be mentioned, for the more particular consideration of anatomists and physiologists. "A fleshy substance, similar to a gland, was found detached from every part in the abdomen." (P. 188.) An organized substance, living, organic and vascular, of a fleshy consistence, and about the size of a walnut, was discovered in like manner loose in the abdomen of a dead body, that was examined a few weeks ago in the New-York Hospital, by John R. B. Rodgers, M. D. A zoologist would be inclined to consider such masses of organized matter, possessing a separate and independent life, as real animals; and give them a place in natural system, with the various worms and vermin bred within the intestines, and in the fat and muscles of other animals. The subject is, in this point of view, so peculiarly important, that we consider it worthy of distinct consideration: it furnishes a leading and luminous clue to the origin and formation of such novel existences.

In the author's tract on Surgery, he discusses severally the cases proposed by Baron Larrey, on the expediency of amputating limbs after gunshot wounds; and relates various instances from the practice of himself and his assistants, requiring that and other chirurgical aid.

The observations on stationary and flying hospitals,

indicate extensive information and detailed experience. They are replete with that kind of knowledge which, while it evinces the ability of the author, serves, at the same time, to guide, in like cases, all who read his book, and who succeed him in the army.

In an appendix are contained two valuable papers. One is Dr. Mann's Dissertation on Dysentery, which obtained the Boylston prize-medal in 1806. In this he denies its contagious nature. The other is his Treatise on the Winter Epidemic of 1815–16, as it occurred at Sharon and Rochester, in Massachusetts; and was relieved and cured by blood-letting, calomel, antimonials, blisters, catharties, and the evacuant plan of treatment.

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*Sulla* PESTE *di* CONSTANTINOPOLI *del* MDCCCIII, *giornale del Dottore* EUSEBIO VALLI, *&c.* 1805.—*A Journal of the* PLAGUE *at* CONSTANTINOPLE, *kept during the Year* 1803, *by Doctor* EUSEBIUS VALLI, *&c.* 1805. *With an Account of his Death.*

THE author styles himself a citizen of Florence, and first Physician and Clinical Professor in the civic Hospital at Mantua. His book in the Italian tongue, contains the history of his proceedings to investigate the true nature of the plague, and to discover some method of mitigating its ravages.

As far as we understand the history of Dr. Valli's visit to the capital of the Turkish empire, it is this:—He had long considered the plague to be a contagious disease. He wished to mitigate its violence. He had observed, that persons under the action of small-pox either did not catch the plague, or if they did, they ran no risk of dying with it; and he had remarked, that the plague relented and became a mild disorder, from the very moment that small-pox appeared and grew to be the ruling epidemic.

So prepared, Dr. Valli went to Turkey, to make experiments on the plague by inoculation. From the fact of the disappearance of the plague before the small-pox, he conceived an opinion that the matter of plague, if

mixed with small-pox matter, would be rendered mild and safe for the purpose of inoculation. He accordingly inserted, during July, a mixture of these two fluids with the point of a lancet under the outer skin of the left hand, between the thumb and the forefinger. He underwent this in the French Hospital of the Pera. He gives an account of his symptoms and feelings during the seven days of his sufferings, by which it appears that he drank freely of coffee, brandy, and wine; he swallowed also opium and asafœtida to relieve his agitation. He washed his hands and face with tanyard-water, and frequently wetted the floor of his chamber with the same. This was done, that the vapours from water impregnated with *tannin* might neutralize, or at least modify the pestilential poison.

He next procured admission into the Greek Hospital of the Seven Towers, a famous receptacle of the pestilential sick labouring under buboes and carbuncles. Here, while he was meditating the inoculation of himself with plague-matter alone, he was attacked spontaneously by the casual plague.

He describes this Christian infirmary as being wretchedly constructed. The rooms in which the sick lie are narrow, badly aired, and more resembling the cells of a prison than the chambers of a house of piety. The place has neither physician, surgeon, nor apothecary. A lady doctress prescribes for the patients. The diet is most rigorous; meat, soup, and wine being denied them. The greater part die; and they are hurried away to the grave before the breath is fairly out of their bodies. The proportion of women to men in this hospital, is as one to six. In this dire abode he went through the natural plague in the month of August. Shocked with the scenery and acting in this asylum, he quitted it, and procured a private lodging. He appears to have taken opium occasionally, in doses varying from six to eighteen grains, and asafœtida from twelve to twenty-four. He also took coffee and brandy as usual, with lemonade, for drink.

Having at length recovered from this disease, he inoculated dogs with pus and bile procured from pestilen-

tial subjects. All of them sickened; but none died. By injecting pestilential bile into the blood-vessels of dogs, he says, he excited indubitable symptoms of plague.

He then announces with the greatest joy to Prince Mouroussi, his perfect success in inoculating simultaneously plague and small-pox; and pestilential matter mixed with gastric juice. With Archimedes he exclaims, *Eureca!* He writes to Professor Gallino how he made a pomatum by incorporating the pus of plague with the juice of the stomach, and employed the mixture successfully, by friction, to cure ophthalmia, paralysis, and other diseases; and how, by inoculation with the same, he cured various obstinate disorders. In like manner, oil incorporated in large quantity with plaguy pus, rendered it innocent; but if the proportion of oil is small, the matter retains a part of its original virulence. To these he annexes a number of curious observations.

In December he wrote to his correspondent Pezzoni, that he had hired several persons to be inoculated for the plague. This was done by friction; the mixture of pus and gastric juice being rubbed upon the skin with cotton.

In a few of the succeeding pages he gives the reasons which led him to suppose the gastric juice a powerful antidote to poisons. He employed that of frogs; but this being difficult to be procured in sufficient quantity on all occasions, he substituted oil, a substance found to be a noble preservative against the plague. While he is engaged in this discussion, he relates what is perhaps the most memorable fact in his whole book. (P. 67.) After stating the power of the gastric juice to correct the venom in the slaver of mad dogs, and in the poison of vipers, Dr. Valli proceeds to remark, "that with the same he had so modified the matter of small-pox, as to produce a disease without eruptions over the skin; a secure disease, and one that is invariably mild." Of this method of mitigating the inoculated small-pox, and rendering it perfectly innocent, he wrote an account to his friend Gallino, which was printed in the Medical

Journal of Venice for 1795, about three years before the publication of Jenner concerning the method of suspending it by the cow-pox.

Behold the different fate of projects! that of Jenner is trumpeted over almost all the habitable globe; while that of Valli is passed by with neglect, or is rather known but to a very few! May it be soon ascertained whether it is worthy of general adoption!

The author afterwards proceeds to state an opinion he entertained, that the distemper which destroyed neat cattle, bore the same analogy to the plague which distresses the human race, that the cow-pox bears to the small-pox. For the purpose of investigating the reality of this conjecture, he passed into Asia, and made a grand expedition through Natolia. On his return, he confessed his disappointment; for although he had found disease enough, and of the very kind he was seeking, among the kine, he satisfied himself by experiments, that its contagion was not communicable to the human race.

On examining the proceedings of this intrepid physician, we have no hesitation to commend him for his disinterested spirit, his benevolent intention, his undaunted perseverance, and his indomitable zeal. It may, notwithstanding, be questioned, whether true philanthropy or medical science have either of them been promoted by the author's labours. After all he has achieved, the subject is clouded by doubts and difficulties.

We shall state a very few of them. 1. If there is a specific poison of plague, we have yet to learn what it is, and where and how engendered. The matter of buboes and carbuncles has not been proved, satisfactorily, to be the peculiar virus of the disease. 2. From various facts we are inclined to believe, there is no more a venom *sui generis* in the suppurated sores of pestiferous persons, than there is a poison of peculiar malignity in the black fluid vomited up in certain cases of yellow fever. 3. There is reason, of course, to suppose, that all inoculations made with such a fluid, are in reality not insertions into bleeding wounds, of a morbid poison capable of exciting in the living body an action similar to that by which it was itself produced; but merely of

a purulent secretion, resembling, in its principal characters, the pus effused into the common abscesses consequent upon fevers. 4. The fever or commotion which is observed to follow such inoculations, is not that of the specific plague, but simply pyrexia, arising from the absorption of an irritating and unhealthy material into the constitution. 5. All the mixtures of it with small-pox matter, gastric juice, and oil, are of no substantial importance in the case; because, upon the presumption that there is no specific virus, those articles respectively can exert no power whatever in neutralizing or modifying it. 6. Of still lighter evidence is the inoculation for plague by means of the gall of persons dead of that disease: it has no means of producing conviction in the rational mind. 7. More vague and inconclusive still are the experiments of injecting pus, bile, and other liquids, into the blood-vessels of living animals: they lead to no useful result, after all their horrible cruelty. 8. The effects wrought upon the bodies of brute creatures, are, at most, but distant analogies in relation to man: not one of them has any pretension to the title of conclusive evidence. 9. There were so many other sources of uncertainty, from Dr. V.'s awful state of mind, from the filthiness of the hospital, from the things received into his stomach during the treatment, that the great question remains very much where it was.

The curious in experiments upon the matter of plague, may find the fluid of pestilential buboes exposed by J. B. Alprunus, chemist, to the operation of fire, in his glasses and retorts, (Lowthorp's Abridgment of the Lond. Phil. Trans. vol. iii. p. 274): they may read how, in 1711, Copenhagen was visited with an epidemic distemper, that was said by the relator, J. Chamberlayne, to have carried off 25,000 persons, and was dignified by the name of the plague. The like happened in 1709, at Dantzic. (Ibid. vol. v. p. 380.)

Dr. Timone's history of the plague at Constantinople in 1720, may be seen in the same work, vol. vii. part 3, p. 161, containing the expression, "that there are various symptoms in the plague, and diametrically opposite to each other, not curable by a single remedy," &c.

If Dr. Deidier's experiments on inoculating and injecting with the bile of patients dead of the plague will edify the reader, he may find them in the same volume, p. 165.

Dr. Valli, if we understand him, considers himself as entitled to the praise of originality in the following particulars: *first*, in having inoculated the same individual, by the same operation, for the small-pox and the plague at once; *secondly*, in having inoculated pestilential individuals with the cow-pox; *thirdly*, in having inoculated with the plague, persons who had previously undergone the cow-pox; and, *fourthly*, in having conceived, as long ago as 1785, the idea communicated to a famous Hebrew physician, that small-pox would be a safeguard against the plague.

We shall now examine the practical facts contained in Dr. Valli's journal. 1. The cow-pox does not act upon a person sick of the plague, (Osserv. xx. p. 50.) 2. The small-pox has no operation upon a patient labouring under the plague, (Osserv. xxii. ibid.) 3. When the plague has become rife, and has assumed the character of a reigning epidemic, the small-pox is wholly unable to check it, (P. 51.) 4. The Greeks and Franks, who turn pale at the very name of the plague, are much more susceptible of it than the Armenians, who have very little dread of it, and the Turks, who calmly take it as it comes, (P. 81.) 5. The inoculation extends its protection no farther than the season in which it is performed, and does not give security to succeeding years and epidemics, (P. 82.) 6. The plague is a distemper so proteiform and multifarious, that he cannot assign to it a diagnostic character; inasmuch as it counterfeits all distempers, and each pestilence requires its own particular mode of treatment, (P. 115.) 7. He is convinced, nevertheless, that the variolous constitution of the atmosphere, and of the human frame, both, have a tendency to keep away the plague, and to render it milder when it makes its appearance.

The author disclaims all pretension of having made a journey to Constantinople to establish a certain method of cure for the plague. His great object was, *to ascertain whether inoculation for it could be practised with*

*advantage*; and this point he has, at least, settled to his own satisfaction, however he may have failed in gaining the assent of mankind at large to the method he proposes.

The latter part of the book contains the remarks of Dr. Valli on the remedies against plague; such as bloodletting, pukes and purges, courage, diet, fires, brimstone, gunpowder, odours, vinegar, nitric and muriatic vapours, oil, fumes of indigo, and flight, under separate heads.

The principal part of the work is in the form of letters from the author to different persons, among whom we observe the Greek physician Kalogera, the Jewish doctor Joab, and several generals, princes, and ministers. There are many facts and remarks on epizootic distempers; and those on the diseases of neat cattle and sheep are worthy of being translated into our tongue, and read by our possessors of lands and of live stock.

As to the actual state of society in Turkey, it is about the same as before the author's visit. The Mahometans refuse to have any thing to do with inoculation for the plague, from considerations of a philosophical or religious nature; and among the Christians, retirement, or shutting up, is mostly practised by the Armenians, Greeks, and Franks, whereby they escape. So that none of the subjects of the Sultan are followers of that inoculation which Dr. Valli has proposed for the prevention and mitigation of the plague.

Dr. Valli was lately in the United States. The professed object of this intrepid and philanthropic gentleman in visiting these parts of North-America, was, as we understood from him, to see the yellow fever; to observe its origin and symptoms; to describe its true type and character; to procure its virus and make experiments upon it; and, lastly, to make similar attempts to propagate it by inoculation, as he has done in the case of the plague.

As was expected, difficulties attended this undertaking. The yellow fever has become rare among us of late: for five or six years it has scarcely been observed in our cities. The severer epidemics of the winter and spring seem to have succeeded it, or to have

transferred it, under another name, to the high and interior country. Perhaps it may not be found for years to come in any of our seaports; not even in Charleston, Savannah, or Orleans. If an endemic distemper, under the name of yellow fever, should arise, there may be uncertainty in deciding whether it is the horrible contagious fever from foreign parts, or only the autumnal remittent of domestic origin.

But, should all these obstacles be surmounted, we are somewhat curious to know what will be the fluid selected for the inoculation; whether the bile, the saliva, the blood, the sweat, the matter of black vomit, or the urine, will be selected as the proper venom for propagating the disease; if either of them is to be employed alone, or in mixture with small-pox matter, gastric juice, oil, or any thing else; how the infection will take by inoculation, friction, swallowing, injection, or any other method of application; and, finally, what benefit the medical profession, or society at large, will derive from these different experiments.

Though we have witnessed much of the yellow fever; though we believe ourselves to have an intimate and practical acquaintance with it; though we have been careful to render our work the general repository of all the facts, histories, and communications that we could collect concerning it; we recommend the prosecution of further inquiries, we wish Dr. Valli a successful issue to his labours, and sincerely hope he may not, like some other persons of extraordinary ardour on this subject, become the victim of his own enterprise.

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### *An Account of the Death of Dr.* E. Valli.

Dear Sir, *Havanna, October* 13, 1816.

I have now the sorrow to announce to you the death of Dr. Valli, on the 24th of September, of the prevailing epidemic at this season of the year, amongst new comers, who visit tropical climates from high latitudes, and commonly called yellow fever.

Dr. Valli arrived at this port on the 7th of September, and as some peculiar circumstances seem to have attended the causes of his sickness and death, I shall give you a detail of them, as they undoubtedly will be interesting.

The day subsequent to Dr. Valli's landing, he did me the honour to make me a visit; and we had a long conversation on the subject of the yellow fever, particularly as it relates to its contagious nature. He inquired of me whether I had found it contagious in this city, or, in other words, whether I believed it communicable from one person to another, as is the case in measles, scarlatina, &c.? To which I replied in the negative; that, in eight years practice in this city, I had not seen an instance where I thought the yellow fever had been received in that way. I, however, observed to him, that I had seen this fever on shipboard, where every person, without exception, had sickened of this malady, and sometimes all of the officers and seamen sickened nearly at the same time; but that I believed the causes of it to have originated partly from the cargo on board, and the concurrent circumstances of a vitiated state of the atmosphere. Two instances of this description I mentioned to him, as having occurred to me two months ago, on board two vessels; one an American, and the other an English vessel from the Brazils, with cargoes of tasajo, or jerked beef, where all hands sickened of this fever, the commanders excepted, in a few days after the hatches of the vessels were taken off; a part of the sick were removed to sick-lodgings on shore, but that neither the nurses or the visitors were subsequently attacked with this fever in consequence; that I heard of some persons, however, who were in the habit of going on board these jerked-beef-vessels, and I verily believe sickened in consequence. I further observed to the doctor, that under certain circumstances of uncleanliness, when a person is labouring under this disease, such as neglecting to remove the fœcal and other discharges from the departments of the sick, as soon as discharged; in neglecting to change the body and bed-linen often; in consequence of keeping the patient in a confined, damp room; neglecting ventilation and fumigation; and

in neglecting to keep the person of the sick cleanly; might cause this fever in persons uninured to a tropical climate, and thus predisposed; more particularly, if they visited the apartments of the sick with an empty stomach.

I observed also, that I had seen people who had sickened of this disorder, and believed it to have been occasioned, entirely, by over fatigue in walking in the hot sun; and others, from the impure state of the atmosphere at certain seasons of the year, in and about this city. Moreover, that I had found many of those persons who were the most remarkable for their temperance in their diet, both in eating and drinking, to be equally, if not more susceptible of this fever, than those persons who drank their wine, brandy and water, and otherwise live as freely, but not intemperately, as in their native high northern climates; and that there were many other causes of a minor consideration, that predisposed strangers to sicken of this fever.

The doctor seemed to be of opinion, that the yellow fever had been as contagious in some parts of Europe, Africa and Asia, as some other maladies acknowledged by all the Faculty to be really contagious; but he believed it to be otherwise in other parts. He observed, that he should make some experiments on himself in regard to this subject, before he left the city of Havanna, to be satisfied on these points.

Accordingly, enthusiastic in his cause, he commenced his experiments by visiting all the dirty, filthy parts of the city and its suburbs, in the heat of a vertical sun, when the thermometer was ranging in the day from 81 to 85 degrees Fahrenheit (never below 81, even at night); and about the time the doctor arrived, we had considerable falls of rain for several days successively, which afforded him abundant sources of speculation in various parts of the city, from the 10th to the 21st of September particularly; as the weather was fair every day but one during this time, and remarkably hot, as was observed by every body.

In his perambulations about the city in this vertical sun, in one of which I walked with him, he could not possibly walk ten rods without observing the excessive

neglect of the police of the city, in their want of executing the police laws in regard to cleanliness, which laws, we are informed, are very good, if properly executed. The streets in the south end of the city, more particularly, are not paved, and are full of deep ruts and hollows, where the water remains stagnant until evaporated by solar rays; and into these ruts and hollows (which is frequently up to a horse's belly in passing through them). the *pots de chambre* and filth of the kitchen are deposited, as well as dead dogs and other domestic animals. I have seen large dead dogs remain in one of these puddles swelled up until they burst and there consume, contaminating the surrounding atmosphere for many rods. But these putrid effluvia were perfectly indifferent to the surrounding inhabitants, they being the poorer and lower order of Spaniards, and consequently too indolent to remove the causes of it. After a few sunshiny days, a yellow-greenish scum arises on the surface of these putrid puddles, which are covered with fermented air-bubbles, from which, exhalations inconceivably obnoxious arise, capable of inverting the stomach of a new comer, merely by looking at it.

Various other local causes, as much or more in point, could be adduced to substantiate the local origin of the yellow fever in this city.

Captain Wheeler, of the brig Sea-Island, of New-York, with whom Dr. Valli came passenger, informed me that the doctor, on his passage out, was remarkably temperate, both in eating and drinking; that he lived principally on soups, vegetables, bread and wine and water, and brandy and water, scarcely ever tasting meats of any kind. He followed up the same course of living after he came on shore here, as his friend Don Jose Casimiro Gonzalez informed me. It was with this worthy gentleman Dr. Valli lived while in this city. Even if the doctor undertook to eat fresh fish, of which this market has an abundant supply, and some of them very delicious, he swallowed the juice only, and then spit out the fish. In consequence of this spare mode of living, the doctor was literally a walking skeleton.

The last experiment the doctor tried on himself will surprise you more than any thing else. Laying aside

the other exciting causes he was daily practising on himself, with the view to render himself the more susceptible of taking the yellow fever, on the 21st of September, fourteen days after his arrival in the harbour, and twelve days after landing in the city, (he being obliged to perform some port regulations customary for strangers who arrive here) the doctor visited the St. John-à-Dieu, a hospital for the male poor of the city and Spanish and foreign seamen; and he was to have been accompanied with Dr. Valle,* the *proto medicato*, and Dr. Tomas Romei, two eminent physicians of this city; but, from a multiplicity of business, these two gentlemen did not meet Dr. Valli at the hospital, as appointed. Dr. V. however, went through the different apartments of the hospital, examining the various cases in it, but making more particular inquiries after yellow fever patients. Finding out that some foreign sailors were recently dead of this malady, and were then lying in the dead-room, he requested permission to see them, which was complied with. When he returned to Don Gonzalez, (at whose house, as I before observed, the doctor lodged) he related the following experiment he tried on himself:—The shirt in which one of the dead men had recently died of yellow fever, was taken off at the doctor's request, which shirt the doctor intended to have put on himself, in contact with his naked body, in the same state in which it was when taken from the dead man, and had been worn by him while he was sick of the fever. The intention was to have tried this experiment before Drs. Valle and Romei, and he waited their arrival for some time; but, being impatient to wait any longer, the doctor rolls up the shirt in the same state it was when taken from the dead man, and rubs it over various parts of his own naked person, such as his breast, face, hands, arms, thighs, &c.; smells at it, as though it had been a nosegay, and applies different parts of his naked person in contact with the body of the defunct, by way of friction, for several minutes; after which he returned to his lodgings, just before dinner.

At dinner, he was requested to sit at table and eat his

* *Valle*, a Spanish gentleman: the other is *Valli*.

soup as usual. Having been very much gratified with his experiment, as he expressed himself, and being a little fatigued by making himself merry with some young gentlemen in the house, who were new comers, at their foolish fears of catching the yellow fever, having been running after them to rub his hands against theirs, &c. he said he would drink a glass of wine, and then he should probably be able to ascertain whether his experiment affected him or not. He drank a glass of wine, and soon after complained of being indisposed, and went to bed. Towards evening he grew worse. He had taken no medicine excepting wine, and rum and water, with a little tincture of bark in it.

At night, or on the following morning, 22d of September, Dr. Cameron, a Spanish physician who attended the family, was called to visit the doctor. Some trifling medicines were administered, little being thought by Dr. C. of his indisposition; though Dr. V. observed himself, as I afterwards understood, as soon as he took sick, that he had the yellow fever, and should not survive it. On the 23d in the morning, Dr. Romei called to see him; as also Dr. Boutefeur and myself. He recognised us, but was evidently sinking under the weight of his disorder; being at that time comatose, with clammy sweats, cool extremities, and a depressed intermitting pulse. On the 24th, at 10 in the forenoon, the doctor expired perfectly easy. It was said he vomited black matter before he died.

You now have, my dear Sir, all the leading facts that I have been made acquainted with, laid before you, in regard to this novel case. I cannot, however, refrain from making some observations, before I close this letter, as it relates to what may have been the causes of this fever in this very eccentric physician and traveller.

Some questions arise with me, whether or no Dr. Valli had not the seeds of this fever sufficiently sown in his system previously to this his last visit at the hospital, being predisposed, as a new comer, never having been within the tropics before? Could not the filthy places he visited as above related, under a hot vertical sun—his mode of diet and consequent debility, superadded to the debilitating effects of a tropical climate, be the causes

of his having the yellow fever? or was it all these causes combined, or the shirt and friction only?

I shall try to get Dr. Valli's manuscripts, if possible, to send them to you and Dr. Mitchill. As soon as the result is known, it will be the subject of another communication. You are at liberty to make what use you please of this letter; only excuse its imperfections; for I have neither time to correct or copy.

I remain,
Dear Sir,
Very respectfully,
WILLIAM FROST.

*To Felix Pascalis, M. D. New-York.*

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*On* HYDROPHOBIA; *its Prevention and Cure. With a Dissertation on Canine Madness, illustrated with Cases. By* BENJAMIN MOSELEY, *M. D. Physician to the Royal Military Hospital at Chelsea.* Sixth Edition, 4to. pp. 88. *London.* 1813.

*Recherches et Reflexions sur la* RAGE, *et sur les premiers Moyens qui doivent etre employés par ceux qui viennent d'etre mordus, &c. Par* B. F. BOURIAT, *D. M. Medecin de l'ancienne Université de Montpellier, &c.* 12mo. pp. 79. *Paris.* 1809.

WHEN on the subject of Hydrophobia and Canine Madness in our preceding volume, page 29—31, we suggested particular opinions of our own, we also expressed many doubts, and earnestly requested from our experienced readers and friends, the favour of new facts and materials for instruction which might occur to them, with which we would be encouraged to institute further inquiries into the difficulties and questions we had laid down. We have since thankfully received from some of our most respected correspondents, new works, the results of their unwearied observations, and accounts of very extraordinary facts. Of these we will now undertake to give some account; but although it would be

difficult to write on any important medical subject, more interesting remarks, and better practical facts, than in the valuable works we have just mentioned, we confess that a considerable part of the mysteries which involve that dreadful malady, and the means of preventing and curing it, are as yet unexplained; and that, however greater the experience of these late writers may be than our own—however superior their doctrines to theories elicited from different facts—yet we may be indulged the hope of further elucidations and discoveries, not only on the canine rabies, but on the subject in general, of the terrible effects which certain external injuries, and certain animal or vegetable substances, may bring on the nervous system. We will, therefore, for the present, dispense with adding or mixing any thing of our own with the analysis of the works before us, which, for the gratification of our readers, we shall endeavour to analyze under four different heads. We cannot do better, in the first place, than make our readers acquainted with Moseley and Bouriat. The celebrity of the first, as a writer, a traveller, and eminent physician in the British empire, is well known on this side of the Atlantic; of the latter (formerly Editor of an interesting medical and periodical work at Tours, in France) we have inserted an essay on the Inoculation of the Sheep-Pox, in the second volume of the new series, page 231. It is worthy of remark, that both have written at the same time, without any probable means of communication, and have not varied in the principal points or views of their subject; they were also induced by the same motive, that is, by the prevalence of hydrophobous canine rabies. Bouriat informs us of his deep affliction on witnessing the ravages of this kind among country people, women and children, in the very heart of his country, caused by a she-wolf. At the same time, Moseley wrote, that, in England, the canine madness was raging like an epidemic. How soon similar occurrences may take place in this country, is unknown; and, therefore, that it is very desirable to be advised and guided by superior experience, certainly none of our readers will call in question.

### *Nature of Hydrophobia, or Canine Rabies.*

Moseley and Bouriat think that it principally originates in dogs. "In these only," says the latter writer, "it is spontaneous, under the operation of unknown causes. They may inflict it by bite, upon ruminating animals and men; but these do not transmit it to others in any defined manner. The brute creation is, therefore, naturally more subject to this horrid disease than human beings. The poison which constitutes it, has affinity only with the slaver of carnivorous animals; for men may eat their flesh, or be sprinkled with their blood, without danger; nor has the bite and saliva of human beings ever proved the vehicle of the same. Yet a rabid dog, &c. may not communicate this poison to every man he bites. The duration of the disease in brutes, is from five to seven days; in men, from one to nine. A human body dead by rabies, putrifies rapidly. Two sorts only of this disease can be designated; one is *spontaneous*, and the other *communicated*." Moseley, on the other hand, asserts, that its mode of transmission so far requires contact, that the rabific slaver might be taken internally, in any part of the body, without effect, if there is no ulceration or excoriation. He makes two different species in reference to animals only—the *raging madness*, and the *moping madness*.

### *Symptoms.*

Moseley thus describes *raging madness* in dogs:—"Under it, they become lank and thin; their eyes are of a red fiery hue; the tongue is discoloured; they froth or foam, and slaver; unexpectedly they start, run against any thing in their way, and will bite indiscriminately. They know no home nor master, and thus are frequently wandering about. They howl and bark hoarsely, bite the ground, gnaw their flesh and their excrement, and die in convulsions."

"In *moping madness*, dogs are seen moping under chairs and tables, as if sleepy and stupid. They have dull eyes, sad countenances, hanging head and tail, ears

flabby, curved back; they shake and tumble, rarely they bark, and die in trembling and tossing."

Let us hear Bouriat on the subject of canine rabies in man:—"It first causes, at times, a deep sense of chilliness and horripilatio, slight sleep, and frequent subsultus. The patient grows sad and languishing, his head is painful, and he complains of difficulty of breathing; the urinary evacuations are rare, sweats are sometimes profuse, and alvine dejections are rendered black and offensive. By this time it is observed that the bitten part or scar, which had probably been healed, has grown painful, turned purple or red, and sometimes opens to discharge a little sanies; from it a chilly sensation arises and extends to the phrenic centre, and the saliva begins to be viscid and thick, the pulse small, contracted, deep, wiry, and irregular. The sensation of an internal burning heat is often complained of, and also impending suffocation. The patient feels an insatiable thirst, yet he scarcely dares mention it! These symptoms compose the sad and distressing events of three or four days, when a heightened sensibility joins itself to the contraction of the præcordia and throat, creating fright as it were of every moving object: this becomes a terror of every thing, even of pure air itself, and of the sight of friends: after a few lucid intervals, it is changed into a horror of light or shining objects, and principally of water; at the hearing of its gurgling, paroxysms of madness are excited. A few days close the scene of a life apparently worn out by exhaustion, pain, convulsive tortures, and all possible moral and bodily distresses.

### *Mode of Treatment.*

There is no material difference respecting the speedy mode adopted by both writers, in the treatment of the wound inflicted by a rabid animal; it is its immediate destruction, in order to annihilate the poison, by caustic or by fire, so as to form another kind of wound, which, however deep and painful, can produce no other evil. The wound requires repeated applications of escharotics, and a judicious surgical management, according to its nature and situation. Until an experienced person can

be had to employ the powerful agents of pure potass, nitrate of silver, muriate of antimony, arsenic, &c. it is proper to burn paper, linen, cotton, lint and tow, and even gunpowder, on the wound. Other means also are recommended, such as bleeding and scarifying the bitten part, and applying any of those ingredients which are commonly and easily obtained, such as soap-suds, cantharides, oil of vitriol, plaster of quicklime and soap, &c. In one material circumstance, however, our authors are perfectly at issue, which is, the internal and external use of mercury. Of this the French physican utterly disapproves, he having witnessed in the Hotel-Dieu, that this remedy, besides hastening the disease, produced many dangers, and even death. He wishes it to be employed only as an irritating application on the wound. It will appear obvious, that, on this question, if only one instance can be produced of effectual cure by the timely treatment of the wound as above explained, the conclusion would be, that mercury affords, at best, but an auxiliary agency for the extinction of the rabific poison. Moseley himself declares, that destroying the part, and the continuation of suppuration for some weeks, is sufficient to prevent all mischief; and that he would not trust alone to mercurial treatment; neither does he acknowledge any specific virtue in mercury, and doubts whether its efficacy is derived from its action on the throat and fauces. After all, it must be candidly owned, that the extensive experience of the British physician, who, in the course of his practice, has seen more cases of rabies than any known practiser, unavailingly places the mercurial treatment in the first rank of auxiliary remedies, even when the hydrophobous symptoms have taken place: for the particular management of which we refer our readers to his own work, which sufficiently and satisfactorily refutes the weighty objections offered against it by Dr. Bouriat.

### *Remarkable Facts and Cautions.*

Moseley was witness of a great prevalence of the canine rabies in London, during three years since 1806, without being able to ascertain to what cause it might be

assigned, except that of a greater number of dogs then wandering in and about London. These animals, however, it is well known, are never an object of fear in the Mahomefan towns of Cairo, Constantinople, and Smyrna, where they are suffered to exist in great numbers, as the best removers of animal substances and carrion, which are there carelessly thrown about; and yet the terrible scourge of which we speak, is not more noticed in the cities of the plague, than in Europe and North-America. It is rare also in the tropical countries. Moseley has, however, seen several instances of it in Jamaica and Hispaniola; and as he is satisfied, that when it has been observed in those hot climates, it could not be traced to importation, he is of opinion that some peculiar influence in the atmosphere generated it in the West-Indies, previous to the period of 1803. The question of the possible duration of the cause, or of the poison in the system, from its introduction into it, is also interesting; but, should we believe in many eminent or modern authorities, it must be thought undefined. Moseley says, that these have protracted it from seven to forty years. He has, however, from the unerring authority of twenty-eight well authenticated cases, and, therefore, sufficiently numerous, proved that the existence of the poison has been uncertain, from the period of nine to that of about two hundred and fifty days. He very particularly recommends great diffidence, and never to meddle with strange dogs, which may be lurkingly diseased: he represents also a mad cat as most dangerous, because the feline kind, as the tiger, &c. start at every thing, and may inflict a wound, and insert the poison by the claws, owing to the habit of these animals to lick their paws: and as for the surgical treatment of the wounded parts, it should not only comprise those which are bitten, but those that are very lightly scratched, which might recruit the disease. All this is illustrated by very striking facts.

Bouriat informs us, that canine rabies is unexceptionably connected with hydrophobous symptoms; but that the horror of water is a disease of itself, which may exist without the first. It may be produced by the passions of fear and grief, by angina, melancholia, or in-

sanity. Besides the cases he has seen, treated, and cured, he brings the authority of Felix Platerus for the same purpose. Another point of caution is that of not confounding canine rabies with tetanic diseases, which may be brought on by the bite of epilepties, or by irritated dogs, the depraved saliva of which has been known to excite both local inflammation and tetanic affection. A state of fury, rage, and madness, from mania, or manialgia, is also independent of canine rabies. That many other causes, as yet undefined, can produce madness, is exemplified in many lamentable instances of the murder of friends, and suicide. Feeling, with error, may compose violent passions, and enrage even that which was created to soften the savage and the brute; witness the shocking fact related by Mead.

We must now dismiss the subject, and express our regret at being obliged to suppress much instructive matter, and many practical cautions, contained in these two performances. One, however, is not to be omitted, that is, the unanimous and most unqualified rejection, by the authors, of all fallacious remedies from empirics, quacks, or even well-meaning persons, who, deprived of medical science and the light of philosophy, are not aware of their responsibility, when they would waste precious time, and jeopardize many lives, by their nostrums, in preference to the certain and judicious means which are actually put into our hands. We may say the same of some specifics or remedies, which, at different times, and in various countries, have been offered to the public by governments, or by creditable medical characters. The test of experience has rarely afforded one single conclusive fact, or one single doctrinal principle, in their favour, but it has been exposed on account of its fallacy. One late instance, that of blood-letting, which has been proclaimed as a discovery, and an infallible remedy,* must still be remembered. We shall, on this score, readily declare, in the words of Moseley, that "practice must stand against theory;" that we have not studied in an Utopian academy, where false hopes are taught; nor have we learned to veil the sacred statue of truth.

* Vide Med. Rep. vol. ii. N. S. p. 19.

As the work of Dr. Bouriat is not in our vernacular language, we recommend, at least, that of Dr. Moseley, which, as a *vade mecum*, should have a place in every practitioner's bookcase. He says himself, "that until the prevalence of canine rabies in London, there were only a few physicians who ever saw it; and that, after it, there was scarcely one who had not had an opportunity of seeing it often." What warning for us to be prepared against a distressing evil, which we probably may witness at some future period! In no other treatise of the kind can be found more authenticated success in the mode of treatment, more experience, more of that useful instruction, which, after many ages, has been scattered among numerous books, and is now condensed in this excellent performance.

# *Medical & Surgical Correspondence.*

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## *Fatal Cases of* HYDROPHOBIA, *which did not originate from the Bite of rabid Animals: with Remarks, by* LEVY BARTLETT, *M. D. of Kingston, Rhode-Island.*

### CASE I.

MR. F. C. jun. a strong healthy man, of about thirty-five years of age, had a heifer sick the latter part of March last. As he did not know her complaint, he administered to her relief himself, assisted by a farrier, his hired man, and one or two of his neighbours. Mr. C. put his hand occasionally into her mouth to put medicated balls down her throat, until a little time before her death, when they were satisfied she was mad, and expected she had been bitten by a mad fox, as they knew of no mad dog near that could have bit her. Mr. C. was subject to have his hands chapped in a slight degree, which was supposed to be the case at this time, as he had not been bitten by the cow or any rabid animal; and although they believed the cow had died rabid, they did not imagine any injury likely to happen to any of them in consequence of handling her.

Within the course of seven or eight weeks after the cow died, Mr. C. who had hitherto remained perfectly well, began to be indisposed, with loss of appetite, debility, erratic pains, &c. which increased upon him rapidly. A physician was sent for, but not suspecting the complaint on his first visit, (neither did Mr. C. or any one of the family) the common remedies for such symptoms were applied. He visited him again soon after, when, from his symptoms, he suspected his disorder to be hydrophobia, which he mentioned to the family; but they still persisted that it could not be so, as he had not been bitten. The doctor, however, to satisfy himself and the family, stepped out, and brought into the room where the sick man lay, a large bowl of water; at the

sight of which he arose, made a peculiar noise, and appeared much frightened. This satisfied them as to the complaint. Mr. C. continued progressing in the disorder, and became, on the fourth day, quite outrageous: although, at times, he appeared rational, and talked sensibly. When his paroxysms were on him, he attempted to bite any thing in his way, to get out of the room and run, and made such noise as was readily compared by the bystanders to the barking of a dog and blair of a cow. At these times the excitement was so great that he was very strong, and had a violent propensity to run. When his paroxysms were off, he was intelligent, conversed freely and sensibly about his disorder, and about temporal and spiritual affairs; said he should soon die, and that two of the others would also become mad. He called his wife to kiss him, which she did, without his offering any violence to her, or his children, or any one else. But, in his paroxysm, he bit a Capt. W. who attempted to bind him. He was very intimate with this man when well, but now had the greatest aversion to him, and said, if others had not come to his assistance, he intended to have killed him. At these times he was much set against his father; said he was a beast, and intended to kill him. Dogs also were objects of his violent aversion: if, through a window, he saw one, it would throw him into a rage, and he would attempt to get at him. On the fifth day he died through exhaustion, not having been able to swallow any liquor for some days, although very thirsty. He took but little food of any kind for some time.

The other men who were exposed, were immediately put upon a course of mercury, and a small ptyalism was kept up for several weeks; but, otherwise, they remain well as yet.

### Case II.

In April last, Mr. J. C. another young man, in a neighbouring town, accidentally finding a dead fox, skinned it, and carried the skin home. In about three weeks after, he was taken sick, with symptoms of a fever then prevailing in his neighbourhood, although his symptoms

put on anomalous appearances from others who had that peculiar epidemic, especially after a few days. Towards the decline of the disorder he was taken with paroxysms of violent raving, with attempts to get out of the room to run: he could take no liquids, and was disposed to bite various articles, as spoons, cups, &c. put to his mouth with liquids; he bit pieces out of two Delf-ware cups with liquids; the spoons were so bitten as to render it necessary to hammer them out. From weakness he became very strong in these paroxysms, so that it took several men to hold him; he had then a great propensity to travel off. A few hours before he died, he became sensible of his approaching dissolution, and conversed rationally, but died through exhaustion.

This man had several physicians, all of whom, except one, who was called after the violent excitement came on, pronounced his disorder a fever. The latter physician, from the symptoms which then appeared, suspected rabies, although no one of the family did; and, on further inquiry, he found he had, before his sickness, skinned a fox, which he found dead without any marks of violence upon it, and consequently concluded that it must have died mad. He then accounted for those anomalous appearances, from hydrophobic virus having been taken into his system by his hands, but perhaps in so small a quantity as not to produce that complaint in its worst aspect. Probably, after the symptoms of the epidemic had subsided, those of lesser hydrophobic excitement appeared, but sufficient to prove fatal, from his previous weak state.

Many people, here and elsewhere, disbelieve that the hydrophobia can be communicated in any other way than by the tooth of the rabid animal; many physicians also believe it; but the first case here mentioned puts the matter beyond a doubt, that people can be inoculated with the hydrophobic virus equally as successfully as with the variolous, or with any other.*

* Moseley writes thus:—"Cœlius Aurelianus has been unfairly censured for asserting that hydrophobia has been caused by the nails of a rabid animal; and for mentioning an instance, likewise, of a

## REMARKS by the WRITER.

**The pathognomic symptoms which distinguish this from all other diseases, are, 1st. The aversion to liquids; 2d. The disposition to run; 3d. The disposition to bite. The other prominent symptoms may be in common with other excitements or disorders; *viz.* the frothing in epilepsy, &c. the raving in phrenitis, the swelled throat in cynanche, the rationality in many diseases just before death.**

**The cure of this disorder has always been a great desideratum. In my opinion, the most successful mode would be, to analyze, and if possible to find out the chemical nature, if not the chemical properties of the virus, by which means such remedies may be applied as would counteract the peculiar excitement occasioned by it. Until that is done, I shall hazard a theory, perhaps with as much success as all preceding ones, and give my reason for this conjecture.**

**All animal poisons are liquids, prepared within the bodies of those animals possessing them, by some natural process in their chemical changes; many of these the great Author of Nature has designed as weapons of defence, and for their economical uses; such probably are the formic acid of ants, the *mellic acid* of bees, and their genera. The poison of serpents, no doubt, is produced in a similar way, by similar causes, and for similar uses; their poison may be a highly concentrated sebacic acid.**

**The hydrophobic poison, although it is not produced as a means of defence, is, beyond dispute, collected in the rabid animal from some morbid cause producing some chemical change, which secretes a virus that will inoculate other predisposed animals: this is the case in**

person becoming rabid from a slight wound received from a cock that was fighting."

"The source of rabid poison, in all animals, is unquestionably in the mouth. I have no doubt but deadly inoculation might be performed in a way which I do not think prudence will justify the mentioning. There is mischief enough already in the world." (P. 39.)—*Edit.*

all creatures which do not naturally run mad. In the canine species, it is believed the disorder is spontaneous.

In all species of animals who generate any kind of virus peculiar to themselves, there must be a pabulum for the generation of that virus inherently within them, and an occasional predisposition, with accidental cause for such generation. Therefore, as canine animals live largely upon animal substances, especially bones, which contain much phosphorus or phosphoric compounds, and as we know they have much phosphorus in their system, as is shown by their excrements, may we not rationally conclude, that this peculiar pabulum of virus may be phosphorus, or of phosphoric origin? And if we can infer from analogy, we may conclude that this virus is a concentrated phosphoric acid.

Admitting that this virus is phosphoric, cannot every pathognomic symptom be accounted for, more easily upon this hypothesis than any other? 1st. We know that phosphorus will highly excite the nervous system, giving great strength to the muscular motions; and even that it will inflame the stomach, or part to which it is applied. From this known action we can account for the great muscular strength of hydrophobic animals, and their proneness to run, from that muscular action. 2d. That this virus attacks the throat by a certain degree of inflammation, is evident in all cases. This may be partly occasioned by respiration decomposing the phosphoric virus, and causing much heat and irritation by their combustion. Hence we see that, to such patients, cold air or strong blasts of wind are irksome. By this inflammation and combustion we may account for the hydrophobic dread of liquids, and the great inclination to bite, in order to expend the surplus excitement upon the fauces and throat, as also the unnatural noises so often made by them. The tantalizing thirst is in consequence of this excitement. The decomposition of the oxygen of the inhaled air disposes to form much saliva, and the air mixing with a part of it, forms the frothy sputum so very common.

These pathognomic symptoms are natural effects of animal actions beyond the control of the rabid man's volition, as much so as the shocks of electricity are.

The paroxysms, like electrical flashes, show some sudden chemical decomposition, which may be like the sudden combustion of phosphorus; in short, every symptom may be rationally accounted for upon this principle, upon the known properties of that substance; the nature of the animal who generates it renders it probable; the analogy of other animal poisons sanctions it; and if the practice of curing this hitherto incurable disorder should confirm it, the cause of humanity will be essentially served, by mitigating the intolerable dread of dying with this horrible disorder, the worst perhaps in the whole catalogue of human sufferings.

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*Case of an* EXTRA-UTERINE FŒTUS, *produced alive, through an Incision made into the Vagina of the Mother, who recovered after Delivery, without any alarming Symptoms. By Dr.* JOHN KING, *of South-Carolina.*

*To the Editors of the New-York Medical Repository.*

GENTLEMEN,

The following account of a case of extra-uterine fœtation, having terminated in the restoration of both mother and child, should you esteem it worthy your attention, or useful to the public, I offer for insertion in your very valuable publication, and am,

Gentlemen,
With great respect,
Your obedient humble servant,
JOHN KING, *Medical Surgeon.*

*Edisto-Island, June 4,* 1816.

THE experiments of celebrated physiologists have established, upon the most incontrovertible grounds, the theory of conception. We are now certain that a prolific geniture is the result of the application of the fecundating principle of the semen masculinum to the

female ovum, in the sexual intercourse. This position, however, has been disputed in ancient records; and it has been asserted, that prolific absorption had occurred from inadequate coition, and also from effusions in tepid balnea.

Confessions of individuals assure us, that a constricted vagina has absolutely prevented voluptuous copulation, and, nevertheless, a prolific geniture had taken place.

We do not intend to dilate upon this subject physiologically, but to confirm and establish the investigations and correct experiments of Drs. Hunter, Monro, Haighton, and others thereupon.

The venereal orgasm exciting the whole uterine system, and contractility in the fallopian tube and ruffle, causes the ruffled extremity to embrace the ovarium; and by virtue of reciprocal action, attraction of the attractive parts, and exfoliation of the evolving parts, concur to make escape the ovum occluded in the ovarium, into the palm of the ruffle; and then, as it were by a capillary attraction, the vesicle progresses through the tube to the fundus uteri, to undergo the *formative* process of gestation.

Now and then, the regular functions of the female tubes become interrupted—the fimbriæ may lose their contractility—the fallopian tubes their elasticity—obstruction, from inflammation, may hinder the passage of the vesicle through the tube, from concreted mucus or gluten; however this may happen, we are sure that the ovum is occasionally deposited in the abdomen by falling from the ovarium, and not seized upon by the ruffled extremity of the tube: then the ovum becomes attached to the sides of the external uterus, the intestines or mesentery, or remains on the ovarium itself, and ventral gestation is assumed by those parts: sometimes, too, the vesicle proceeds no farther than the tube, and gestation is completed there. The term of accretion being ended, pains of distension take place, labour supervenes, and the reiterated efforts of nature at length excite inflammation, suppuration, and mortification. The fœtus always perishes, and the mother becomes emaciated—

*Omni miseria cumulata mater.*

That these deplorable circumstances occur, the reader may be well assured, by consulting all the writers on the subject of extra-uterine fœtation.

It is not my intention to detail all the circumstances of suffering and deformity, of mental and bodily distress, which await the unhappy mother of a fœtus bred *ex utero*, but they may be easily imagined.

The woman in question had been four days in labour, without, however, any of the ordinary signs, yet the pains returning in the manner of natural labour. The patient, wearied out with these unprofitable efforts, desired assistance. On my arrival, I examined *per vaginam*, and found that the os uteri could no where be felt.

Having never met with a case of this kind before, I revolved in my mind the method of delivering this unfortunate woman, and of saving the lives of both mother and child.

The operation was simple, and consisted in laying the vagina open to a great extent.

The head of the fœtus floated and vacillated on the right side of the uterus, and pushed the uterus from its situation. I introduced a small bistoury, guarded by the end of my finger, as far as I possibly could, so as completely to embrace the circumference of the head, and thereby prevent any laceration of the parts in the progress of delivery. I then pierced the vagina through, and carried the knife five or six inches downwards and backwards, so as to insure the easy extrication of the child's head.

The instant the vagina was laid open, the waters flowed abundantly; the membranes being laid open with the same incision. I then introduced my hand through the wound in the vagina, and found the infant very high up, and firmly fixed, without any prospect of its descending into the pelvis.

As we could derive no help from the contraction of the uterus in this case, and all the efforts of the mother depending on the contraction of the recti, transverse and oblique abdominal muscles; I therefore desired the assistants to press gently and constantly upon the abdomen, and to imitate a circular descending motion with their hands.

The mother, animated thereby with the prospect of delivery, redoubled her efforts; and, with the help of the vectis, I perceived the head to advance by slow degrees into the pelvis; and I afterwards, with the forceps, completed the extraction of the infant, after two or three hours uninterrupted exertion. It appears, therefore, that the abdominal muscles alone are insufficient for the expulsion of the fœtus. I was very sensible of this, and must greatly attribute its descent to the external co-operation of the assistants, with the use of the vectis on the child's head.

It would have been proper to have turned the child, if the above endeavours had failed.

The child appeared to be still-born, but not being certain of that, I inflated the lungs through a tube, and was pleased to find it had borne the brunt of the day, without any fatal event.

The hemorrhage, for this large incision, was inconsiderable, and by no means capable of exciting any alarm, and was of use in moderating the adhesive inflammation.

The infant was of the common size, and well conditioned.

The placenta was uncommonly small, and the funis umbilicalis remarkably thin, so that it ruptured on the evolution of the infant, though without any hemorrhage.

The part to which the placenta adhered, whether the ovarium, the mesentery, the intestine, or the parietes of the external surface of the uterus, did not probably afford so easy an accommodation to the new economy thus instituted, and therefore circumscribed the boundaries of the placenta within narrow limits; yet the fœtus was well nourished, and plump. The umbilical arteries carrying a smaller column of blood through this diminished funis, the mother, probably, had undergone a longer utero-gestation than usual. It is not my object, however, to animadvert on that phenomenon.

The morning after delivery, I extracted a full bleeding from the arm, and repeated an anodyne. I left the patient without complaining; and on interrogating her afterwards with respect to the operation with the knife, she declared that she did not know I had used one. This circumstance must hold out a great encouragement

to perform the incision, in every case of extra-uterine fœtus.

I had caused her to lie on an inclined plane, upon her back, with the head very low.

I was not able to see her again until the third day. I then found her state uncomfortable, with pain over the pubes; and on examination *per vaginum*, discovered the intestine pushing at the wound; the wound itself being much contracted.

I ordered her to lie on the left side, with the hips more elevated, to favour the retraction and gravitation of the intestines from the wound. This uneasy position favoured our views, and answered our expectations. I caused a blister to be applied over the pubes, and prescribed a saline anodyne mixture, to be taken three or four times a-day. I made it an object to constipate the bowels for ten days, until the danger of any hernial protrusion was over.

In two weeks, this woman, without my consent, walked about. I then found the intestine could no longer protrude through the wound, under any circumstances of posture. In two weeks more, I could not discover that there had been any incision made in the vagina. The uterus resumed its natural site; though I am persuaded, its whole body had wasted during this extra-uterine gestation.

The event of this case is a certain proof that every infant, so situated, may stand a great chance of being delivered alive, and no harm whatever can accrue to the mother, *cæteris paribus*, from the operation.

The shocking accounts of extra-fœtal cases I have read in different publications, and never having seen or heard of infants being delivered alive, thus circumstanced, is my reason for troubling the medical world with this trifle; which, if it should prove either useful to them or serve the cause of humanity, I shall be highly rewarded for my pains.

## REMARKS.

A few important considerations arise out of this very unpreecedented and truly surprising case.* The first leads our mind to the object and march of physiological laws in the organic functions of generation. We have already, in our preceding pages, contended for the existence of strong peculiarities of conformation, and organs, for propensities and passions which are all necessary and concurring to the propagation of our species. It seemed to us, although we did not precisely declare it, that every part of the human body was endowed with a power to generate, instead of that exclusive system therein explained, which would make it sufficient for the human matrix to receive the ovum, even against the will or during sleep, to effect conception and gestation. But it now comes out, that this organ does not enjoy an exclusive privilege; that it is only the best provided one for the safe-keeping of the fœtus, for its future and more convenient expulsion by means of its contractile power. It is also clearly demonstrated, that the accommodating disposition of the animal machine can furnish many resources for the grand object of generation, even in the ventral cavity, where forms and necessary appendages can be obtained, and life itself be infused, at the completion of reproduction. The uterine cavity is, therefore, not exclusive in the process of generation, no more than in that of conception: a mechanical or adventitious act of the male upon it, is not to be considered as the only requisite. Thus we justly place the female in a much higher degree of importance and concurrence in the formation of a being which her bosom shall afterwards have the sole privilege of nurturing and expanding from a gelatinous mass to that of a perfect offspring.

The other consideration is, the unerring indication of an operative process in the rare but not unknown case of extra-uterine gestation, which Dr. King speedily re-

* The Editors wishing to present this case with all the authenticity which it deserves, inform their readers, that the communication came to their hands through the polite care of William M. Ross, M. D. of this city, who received it himself from the Rev. Dr. M'Leod, of Charleston.

solved upon, on finding that the matrix did not contain the ovum. If, among many similar cases which are recorded, we consider the most recent, we are obliged to conclude, that with the same presence of mind, the life of the mother and child could have been saved by gastrotomy. We allude to that of Mrs. Calvert, in England, which was so comprehensively delineated by Mr. William Turnbull, a surgeon of eminence. At the evolved period of fruitless but natural symptoms of parturition, flooding, &c. the uterus was ascertained to be empty. The fœtus, it is true, did lie in a different position, having the head upwards in the abdomen; but it could have been far more easily extracted by the operation described in our preceding volume, page 194. Mrs. Calvert died six weeks after, in consequence of an inflammation of the bowels. The colon was found ulcerated and ruptured in many places, owing to the exertions of nature in preparing a way to get rid of the dead mass; but certainly the fœtus had enjoyed life, since it was perfectly formed, and was provided with the necessary involucrum, funis, and a substitute for placenta. A part only of this apparatus could be seen in the case of Dr. King; and that of Mr. Turnbull was materially different from what envelopes the ovum in the matrix. The mode by which nature can adapt a system of circulation to a ventral gestation must, no doubt, be different, and perhaps vary in every instance; yet the end is perfectly attained, as is sufficiently proved. We congratulate the ingenious medical surgeon of Edisto-Island for his successful performance of the before-mentioned operation, and wish that his prosperity may be equal to his professional usefulness!

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*A Case, in which* QUICKSILVER *was efficacious in* PHTHISIS, *and* VENESECTION *in subsequent* DROPSY. *By Dr.* MALACHI FOOT, *Port-Royal, Virginia, August* 29, 1816.

ON the 9th of June last, I visited a woman, aged 16 years, the servant of Catharine J. Barber, in the hectic stage of phthisis pulmonalis. Her disease was

induced by the measles; and reckoning the inflamed state of her lungs from that date, she had been declining sixteen or eighteen months.

She was labouring under dyspnœa, cough, and a copious purulent expectoration; night sweats and diarrhœa had alternated for some time. The hectic paroxysms, with chills, occurred regularly twice in twenty-four hours; she had lancinating pains about the scapula and sides, with loathing of food, and great debility, not being able to walk more than a few rods. The frequency of her pulse was, at times, so great, as to render counting it impracticable. Not many days previous, she had suffered a copious hemorrhage from the lungs.

With these symptoms, which I am sure are not exaggerated, I should not have thought it necessary to have made any more than palliative prescriptions, had I not, more than once before, profited by the precepts and example of Dr. Rush, which teach us never to despair in any stage of this disorder.

The treatment was as follows:—She lost a few ounces of blood, and was put on the use of powders, composed of merc. hydr. mit. muriat. sulph. ant. and nit. potass; the period of her chills was anticipated by an opiate, pediluvia, and a tea-cupful of a strong decoction of rad. seneka. She was indulged with anodynes, when irritation and cough were most troublesome; had repeated blisters applied about the chest; took syrp. sem. lini, demulcent teas, and was directed a bland nutritious diet.

I saw her again on the 17th of the month, and, contrary to expectation, found her mouth moderately sore, with an abatement of all the symptoms. She was directed to a continuance of the mercurial powders, to use a decoction of quassia, and to ride on horseback, twice a-day, to the full extent of her strength, which, at first, was only a few rods.

On the 21st, I found her under a healthy salivation; the hectic paroxysms were entirely arrested, and her pulse indicated nothing more than a mercurial excitement. The powders were discontinued, and in addition to her tonic bitter, she was put on the use of muriat. ferri; was directed to restrain, by opiates, any cough which might interrupt her night-rests; to use a more

solid diet as soon as her mouth would permit; to continue equitation; and, after a few days, to use cyder, and brandy and water. This treatment and regimen were continued; and, on the 10th July, I found her taking long rides, and having a strong appetite. I therefore discontinued further attendance, advising her to continue her daily rides, brandy and water, and a solid stimulant diet.

I heard no more of her until after the 20th, when I received a line from her mistress, requesting me to visit her. I found her entirely well of her old disorder; but she had a tumid abdomen, indicating ascites, and considerable dyspnœa, when recumbent; her legs were œdematous, and I was told she had an œdematous state of the labia pudendi. It is unnecessary to observe, that this aspect of my sable patient's situation produced some surprise, and even solicitude; for I had, more than once, mentioned her case, probably with some vanity, and had often heard it mentioned by others. But a few minutes reflection convinced me, that I had pressed the stimulant treatment too close, and that I saw before me an exemplification of a case of conversion or metastasis of disease, as well as an exposition of a medical principle I had long since adopted from Dr. Rush; *viz.* that the remote cause of dropsy is a morbid excitement of the arterial system, making the "*hydropic state of fever*" of that great authority.

Her treatment was as follows:—Without regarding her pulse, I took from her twelve or fifteen ounces of blood, which was buffy, and then gave her a cathartic of jalap, crem. tart. and ginger: this was followed by sal. nit. in large doses. She was put on a diet of milk, with baked apples or whortleberries, and was directed to continue equitation as before. In a few days she was able to ride to Port-Royal, and return, which was twenty miles. Her dropsical symptoms had disappeared, though respiration was a little hurried. I gave her a phial of tinct. digitalis, with directions for its use, and prescribed a syrup ex allio et rad. enula camp. I heard from her yesterday, and learnt that she was well, and had resumed her servile vocation.

Instances of the favourable issue of the mercurial

treatment of pulmonary consumption in the United States are so numerous, that the authority of this case was not wanting to recommend the practice. But we might feel some surprise at the dogmatical incredulity of Dr. Thomas, in stating, that this remedy promises to be of service "only in that variety of the disease which appears to be occasioned by an enlarged and indurated state of the abdominal viscera, or of the lymphatic glands of the mesentery," were we not, in some degree, prepared to witness the erroneous opinions of that respectable author concerning the state of medicine in this country, by having asserted, in a preceding page, the contagiousness of yellow fever, and even of common remittent fever.

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*A Case of* STRICTURE *of the* RECTUM, *and of* HEMORRHOIDAL EXCRESCENCES *cured by* TOBACCO SMOKE, *received from the Patient himself, September*, 1816.

I Had long been troubled with costiveness, for which I had tried all the known remedies, in a course of several years, when I found myself afflicted with hemorrhoids. After one or two years from the first appearance, so as to excite much notice, of this complaint, it had caused a good deal of pain, and, occasionally, copious discharges of blood. During nearly six years, I had been constantly obliged to return these troublesome excrescences by pressure. To lubricate the parts, I had only used a little tallow, after long discontinuance of the proposed remedies, which seemed to do no good. In the winter of 1816, I found myself often unable to expel the fæces, when there seemed to be a disposition to do so. On examination with the forefinger, I found, at about the extremity of my reach, a hardened ring, of a cartilaginous nature, so small as barely to admit the insertion of the point of the finger. This discovery, of which I had no previous conjecture, led me at once to seek earnestly for relief. My family saw that my flesh was wasting away, and my friends often inquired what ailed me? The pain of going to stool, together with the

length of time that it consumed, made me postpone it through the day; and I had long been in the habit of *going to the temple* late in the evening, with a lighted candle. With the tallow from this I had lubricated the hemorrhoids; for without this I could seldom restore them to their position, and then they were very painful. After some time, it became inconvenient to carry a candle, and I used to go back with a lighted segar. To supply the tallow, I carried a small box of it constantly in my pocket. I had discovered, that after a considerable effort to expel the fæces, the little ring that I spoke of, and which seemed a cartilaginous contraction of the rectum, lay directly crosswise, with the opening pressing close against the left side; and that making an effort to draw up the intestines, raised this nearly out of my reach, but left the opening pointing directly downward. This was a circumstance of which I hoped to take advantage, as I have since learned to do.

The great quantities of a whitish and very viscid mucus excited also my astonishment. Doses of calomel and jalap gave a temporary relief, with other purgatives that I tried; and the whole intestinal canal seemed clogged with dry and hardened fæces, as if rolled in little balls to fill every sinuosity of the guts. The whole contents of the bowels, discharged by active purgatives, seemed to consist of these, with but very trifling exceptions. Aiding the operation of those medicines by every means in my power, I procured, after some weeks, a pretty thorough discharge of the contents of the bowels. At last, the quantity of undigested sordes and viscid mucus was diminished, and the stools became fetid, as I had wished. Those little lumps were no longer covered with mucus, and what appeared began to assume more of a yellowish cast.

After I had succeeded in emptying the bowels, I still always found lumps of mucus, very viscid and hard, occupying the orifice of the stricture, for such I concluded it was. I now made use of the heat of my segar to melt the tallow in a small tin pill-box before noticed, and on applying the tallow to the hemorrhoids, I immediately perceived that the tobacco smoke, which had been incorporated with the tallow, produced a kind of

stimulating effect. In time, I found it had softened and reduced considerably these troublesome causes, or effects, of my complaint—I was not certain which; so that, after some weeks, there was a freer passage in this part; and that sense of fulness and pressure, in the lower region of the rectum, which had so long annoyed me, was in a great degree removed. This was encouraging—it was one step that seemed to give me a good deal of hope. The sanious discharge was very much reduced, and I could not but hope that the part was recovering a more healthy tone of action; I even fancied that the orifice of the stricture was somewhat enlarged. The effect of this exhibition of tobacco smoke sometimes gave me alarm; it almost produced syncope, so far as I could judge, for I had never felt it. For some hours after the exhibition, it gave a tremor to the nerves of the whole body, and I proportioned the doses accordingly. It seemed to be the cause of a weakness in the knee-joints, which I was frequently afraid would be observed, and attributed to strong drink, a suspicion from which I had always been perfectly free. My fears and inquietudes, however, were too great on another account, to give me much trouble on this; but I hesitated how to proceed. I at length concluded, that if my application had been of service so far, it might safely be tried on the stricture. Keeping the contents of the bowels constantly in a soluble state, by the use of mild laxatives and a light and easy diet, I prepared for the experiment.

Inserting the segar in the box, about half filled with beef tallow, I melted some by its heat, blowed the smoke upon it, and withdrew the segar, covering the mouth of the box while the tallow cooled, when the smoke would remain, having all been incorporated with the tallow. Of this, after being perfectly cool, I formed a little ball, of the size of a common pill, and taking it on the end of my finger, conveyed it into the orifice of the stricture. I soon felt the effect of it, though not so sensibly as before; nor did it seem to produce exactly the same kind of sensation. On the first examination, I found it had softened the mucous concretions of the part, had changed their colour, and made them less viscid. They still were

brought away on the end of the finger, but so changed in nature as to give me great hope.

Persevering in this treatment, I have found great relief. After a week or two, I was able to insert the finger, about, as I should judge, a half inch, which enabled me to reach quite through the stricture.* By frequent exertions to enlarge it, pressing in different directions, I have assured myself that the contraction was occasioned by a cartilaginous ring, of a half inch, or a little more, in width; and that, when first discovered, the orifice did not exceed one third of an inch in diameter. The folds, if I may so call them, of the rectum, seemed to fill all the space of that gut below the stricture; and in these folds the fæces seem constantly inclined to lie in lumps, and to become very dry and hard. If this difficulty could be removed, I think I should be led to expect nearly a perfect cure. Since last spring, I have persevered in the plan of treatment above described, and every symptom of the complaint seems greatly ameliorated. The hemorrhoids are very much reduced; they have become soft and flaccid, seldom bleed, occasion no pain, or none compared with what they have done; and I am, on the whole, better of this affection than I have been at any time before during six or seven years. My stools are pretty regular, and voided without pain. The orifice of the stricture is very much enlarged, and has become soft, nearly like the other portion of the rectum, so far as I can judge by the feel. I still occasionally insert the pill of tallow and tobacco smoke, which, now that the operation has become familiar, and a means, under the blessing of Providence, of saving my life, is attended with but little trouble. The recurrence of lumps of white mucus immediately call for this application, and which pretty soon produces an evacuation of a healthy-looking stool. I have found it necessary to keep the pores of the skin open; for any obstruction immediately indicates itself in the increased quantity and white colour of this mucus, which is soon followed by a headach of a very peculiar kind, and a heaviness and stupor of feeling.

* Situated about two inches and a half up the rectum.

*N. B.* I know not why, but the effect of lard is directly injurious, increasing both the pain and the tumefaction. Fresh butter did not answer my expectations; I have found nothing better than tallow impregnated with tobacco smoke, and made into small balls or boluses,

## REMARKS.

We consider the preceding case of great practical importance: it brings into view the application of a remedy, of powerful efficacy in a disease which is serious, and more frequent than it might be supposed.* Its employment in the mitigation of stricture of the rectum, as related in the preceding case, is accidental, but nevertheless entitled to serious consideration. The author must feel happy in the relief he has obtained for himself, and the valuable information he has given to the public, particularly when he is informed, that this distressing disease has been heretofore generally considered as fatal. Its progress is slow, tedious, and painful, leading to a lingering termination, and inevitable death. This is the opinion both of Desault and Sherwin. The Essay of the latter on the Scirrho-contracted Rectum, is published in the Memoirs of the Lond. Medical Society, vol. ii. p. 9. The relief to be obtained in this disease, is considered by him to be trifling, and only palliative. His essay is accompanied by several plates of the morbid anatomy of the parts, illustrating the fatal progress of the complaint. Later observations, however, have added some information on its further treatment. Mr. Copeland, of London, wrote on the diseases of the rectum,† and proposes two methods of relief and cure. The one, by the repeated introduction of bougies; and the other, by an operation, wherein the stricture is divided with a bistoury. Copeland and Ford‡ have both operated in cases of indurated

* We have not only met frequently with this organical disease in our private practice, but we have lately seen many cases of it in the hospitals at Bellevue. Some years ago we observed, also by dissection, two remarkable instances of an absolute obliteration of the rectum, which had progressed through the most distressing symptoms.

† Copeland on the Rectum. London, 8vo. 1810.

‡ Ibid. p. 34.

annular stricture, by dividing it in its posterior part. Though we have seen several cases of stricture of the rectum terminate fatally, we have also seen relief produced by this operation. In operating upon a soldier with *fistula in ano*, the first intimation or knowledge of a stricture was given by an obstruction to the passage of the finger nearly three inches up the intestine. This happened in 1807, and was the first case of the kind that had occurred to the operator. The fistula was below the stricture, and was laid open as usual. Upon a further examination, it was found impossible to pass the finger through the stricture; and with this obstruction remaining, the operation for fistula would have been of no avail: it was therefore determined upon, immediately to divide this contraction of the gut. This was accordingly done, by passing the probe-pointed bistoury through the narrow opening, and dividing the stricture on both sides, to the base. It was united to the intestine by a base of half an inch broad, and terminating in a thin edge at the narrowest part: it was hard and cartilaginous, and gave no pain in dividing it. The determination to divide the stricture, was made from proper considerations at the moment, but without the knowledge of a similar operation in like cases; indeed this circumstance took place before Mr. Copeland's publication, which is the first we have seen recommending the practice. Considerable hemorrhage was the result of the operation in this case; but a temporary bougie, made of bees-wax, and passed through the stricture, had the desired effect of stopping the flow of blood. The wax was kept in its position for several days, and by its pressure upon the stricture, tended to promote absorption of the cartilaginous ring forming the obstruction. The patient recovered, and the stricture was removed.

The division of a cartilaginous or scirrhous contraction of the rectum, by cutting on both sides, we consider preferable to a single incision, as recommended by Mr. Copeland; and the use of the bougie should follow, instead of preceding the operation. A combination of these two methods of cure, when judiciously applied, may produce the desirable result—a removal of the disease.

But, independent of these means, the timid, who cannot bear an operation, may advantageously seek relief in the use of tobacco. We are induced to think well of the medicinal application of tobacco to stricture of the rectum and piles, from its analogous operation in other chronic and indolent diseases. It is well known to be a powerful remedy in colic arising from constipation. Its power and efficacy, however, have been made objections to its use, as its violent operation has sometimes produced death. But if it is considered as a poison, it only wants to be modified and regulated in its exhibition, like other remedies equally powerful and valuable.

In this case, it appears that tobacco smoke will dissolve the scirrhosity of a strictured rectum, or that its action upon the diseased part will restore a more natural and healthy one to the torpid intestine, and promote absorption of the morbid accumulation. We who have suffered with hemorrhoids and fistula, rejoice in the discovery, and believe in the efficacy of nicotiana in curing some of these diseases of the rectum. In the cure of hemorrhoids, we agree with the narrator of this case, that mild cathartics are the best; and that tallow by itself, or in composition, is soothing and useful, while hog's lard is not so. His manner of using the article in this case, however, is not perhaps the best adapted to convenience and utility. A mild infusion, used by injection, would apply the remedy more certainly to hemorrhoids or stricture, or both combined. An ointment of snuff and tallow, to lubricate the piles when the tumors are external, would be the best application. The dryness of the rectum which our narrator complains of, would be relieved by such injections, or even warm water, or salt and water, *par lavement*. Bougies might be rendered more efficacious, when some unctuous substance, impregnated with tobacco, was applied to their surfaces. These and other methods of applying tobacco, might be devised for the relief of the costiveness attending fistula, piles, or stricture.

Costiveness may exist alone, and independent of hemorrhoids, fistula, or stricture, though the three latter are always accompanied by the former. This is frequently mistaken by the patient for looseness, where a

tormenting tenesmus brings away the liquid part of the fæces, leaving the solid behind. In such a case, the intestine becomes dry, by discharging its mucous covering along with the irritating evacuations. The solid contents of the bowels, by the repeated action of their rugæ, are formed into scybalæ, or small rounded lumps, which remaining in the lower intestine, keep up the irritation and discharge of mucus. This state of disease is attended with a distressing sense of uneasiness, and is frequently the cause of a melancholic depression of mind. Superficial observers give it the name of *dysentery*, and relief is often sought in the vague advice of friends recommending astringent food or medicine, thereby increasing the evil instead of producing a cure.

Much costiveness produces hemorrhoids, and these, when formed, obstruct the passage, and render it habitual. Hemorrhoidal tumours are accompanied with an itching about the fundament, and a dryness which causes smarting and pungent pains, and chafing, the consequence of exercise. Inflammation being thus excited in the rectum, fistula, scirrhus, or both ensue. The whole train of diseases to which this portion of the intestine is subject, appears to depend upon an original state of costiveness. This may be relieved by tobacco in some form or other; and when followed by its disorderly train, we are happy to find that they may be relieved, mitigated, and cured by the same remedy.

MEDICAL TOPOGRAPHY *of the Military Positions in the third United States Military District: together with a summary Report on the Diseases of the Army, from the Commencement of the War, in* 1812, *to its Termination, in* 1815; *embracing also the Mineralogy of the surrounding Country. Communicated to* JAMES TILTON, *M. D. Physician and Surgeon-General, by* SAMUEL AKERLY, *Hospital Surgeon, United States Army.*

(Concluded from page 300.)

## INTERIOR LINE.

THE interior line consists of the islands in the harbour of New York, the batteries along the Hudson, supported by artillery and infantry in the city.

### I. INSULATED GARRISONS.

The islands in the harbour, prepared for defence, and occupied by troops, are Governor's, Bedlow's, and Ellis' Islands. Governor's-Island is the largest, situated off the south-east end of the city, containing about forty acres; having upon it Fort Columbus and Castle Williams, in the best state of defence. Bedlow's and Ellis' Islands are small, but eligibly situated, and well prepared for the approach of an enemy. They lie on the western side of the harbour, on the edge of the channel, and in a raking position to an advancing marine force. In the rear of them are oyster-beds and mud flats.

There are no causes to render these islands unhealthy, except their confined limits. No particular disease has prevailed in these garrisons, nor any prevalent mortality, during the war. Ellis'-Island lies near to and on the north of Bedlow's-Island, and is supplied with water from the latter.

These islands are all alluvial, composed of sand and stones. Governor's-Island is deposited upon a foundation of granite, discovered in laying the corner-stone of Fort Columbus, which is supported by this solid primitive basement.

## II. New-York.

The West Battery, the North Battery, and Fort Ganse-voort, have been built in the river, on the west side of the city. The first is situated at the south-west point of the island, and the others north of it, about one mile and a half apart. They have been garrisoned during the war, but have given rise to no disease or mortality.

New-York is situated on the south end of an island, which forms a county of the same name, being fifteen miles long and two broad. Its greatest extent is from south to north, and it lies in a direction nearly between S. S. W. and N. N. E. It is bounded by the Hudson on the west; by the East River on the south-east, as far as Hurl-Gate; while the remaining part to the east, and its northern extremity, are laved by Harlaem River, which unites with the Hudson.

That part of the county of New-York over which the city is built, is a secondary or alluvial soil, consisting of sand and gravel, like that of Staten and Long Islands. The northern part commencing about the suburbs, is composed of strata of granite, lying in a direction between N. E. and S. W. like the other granitical strata of North-America. It is sometimes veined with quartz in its own direction, and sometimes transversely, and has an inclination to the east. The carburet of iron has been found among these primitive materials; and in the fragments of rocks blown to pieces at M'Gowan's Pass, to complete those works of defence, I lately discovered pyrites. On the northern extremity of the island, in a body of primitive limestone, the ore of titanium has been found. I beg leave to refer you to Bruce's Mineralogical Journal, vol. i. p. 191, where I have given the geology and mineralogy of New-York more in detail.

The troops in garrison or encampment on the island, have, at no time during the war, suffered from disease or mortality, more than those of other garrisons or encampments in the Third Military District. Having noted the several positions, their topography, mineralogy, and diseases generally, the summary of these diseases, and observations resulting therefrom, will follow in their proper order.

## Diseases *of the* Army *of the Third United States Military District.*

We may felicitate our country, that the soldiers of the army of the Third United States Military District have had no cause of long-continued or extraordinary sickness, nor has any prevalent fatality attended the ordinary diseases. Fevers, consumptions, with other disorders of the lungs, and bowel complaints, have been the most common. The rubeola, or measles, has annually visited the troops in the winter, though not with any degree of violence. Few cases have proved fatal, except where the disease has run into chronic catarrh, and terminated in death by consumption. The following statement exhibits at one view the total amount of diseases during the war, according to reports received from the regimental surgeons:—

| | | |
|---|---|---|
| Intermittent fever 625 | Typhus fever 551 | Diarrhœa 1,945 |
| Remittent ditto 1,256 | Dysentery 1,269 | All other diseases 6,309 |

This summary contains the whole of the reports made during the war. The same reports state the number of deaths, from the above sick list, at only 235; the whole amount of sick being 11,955. Both these are probably short of the true numbers, as there was much irregularity in the sick returns from the militia.

These are exclusive of the reports from the General Hospital, which was established and opened in April, 1813, near Fort Gansevoort, in the suburbs of the city, and on the margin of the Hudson River. The arrangements for the peace establishment took place in the latter part of June, 1815, when my duties ceased. During this period of two years and three months, there were admitted into the General Hospital, 825 patients, of which number 55 died. Many of these were examined, and a statement of the morbid appearances in some, affords interesting views of their diseases.

There were few operations to exercise the skill of the surgeons employed in this department. Two amputations only were performed during the whole time, and one operation for hydrocele. The saphena vein was tied up in four instances, according to the method of Mr. Frere, the result of which was rather unfavourable to his plan of operating in such cases. *Vide Med. Rep.* vol. ii. p. 306.

# INTELLIGENCE.

*Atmospheric Constitution of New-York, from October, 1816, to January 1, 1817.*

WE have particularly noticed in our last number, the unusual changes of the preceding season, its atmospheric and planetary appearances, with the calamitous state of agricultural produce throughout the country; but we happily found it unnecessary to make further remarks on the morbid effects of weather, winds, and drought on the human constitution, except the occurrence of more frequent suicides, of mental derangement, and of various vesaniæ which had been observed in this metropolis. The public health has continued unimpaired, or rather unassailed, by epidemical or by unusual diseases; although human life has not been more protected against the casualties of age, of organic diseases, and of immoral practices. We also find that all the summer crops have not been destroyed, although that of Indian corn, and various sorts of garden stuff, have severely suffered; and if other grains have been lessened in quantity, they have proved to be of a better quality. The late rains of the autumnal period, and the continuation of a mild temperature, have protracted the use of pasture ground, and spared the very scanty stock of fodder for the cattle. Among the various fruits which a bountiful Providence annually creates for man, if many sorts happen to be blasted in their growth, and before ripening, during certain unfavourable seasons, other kinds are, nevertheless, more profusely preserved till winter; and this has been the case with pears and apples, the last especially, whereby is secured to numerous classes a liquor to gladden their hearts, and an important substitute for the luxuriant grapes of distant countries.

In terminating this volume, at the expiration of this year, and after having successively stated whatever at-

mospheric circumstances which, from time to time, are connected with the general health, or may be productive of diseases, we beg leave to introduce, for the gratification of our readers, a general statement of the atmospheric constitution, as observed in Virginia, by an ingenious correspondent; and such as it has, more or less, prevailed throughout the United States.

The unexampled coolness of the summer thus far has prevented the recurrence of the fevers usually prevalent; but we are beset by a train of evils of no less magnitude. The otherwise meagre corn crop is now threatened with almost utter ruin, by the prevalence of a drought of long continuance; thousands of acres in this great and almost never-failing corn country, will yield nothing but parched husks. Garden vegetables are scanty, crude, and innutritious, often producing oppression and sickness; and fruit is universally sour and unsavoury—strawberries were scarcely eatable. We have had, as yet, comparatively, but few warm days; and whenever the temperature, for four or five days, has arisen to its usual degree, it has always been suddenly succeeded by a greater number of cool, or rather cold days, with the wind fresh at north-west or north-east, rolling the Rappahannock in waves. Fires in our sitting-rooms, morning and evening, have generally been not only pleasant but necessary. Wednesday, Aug. 31, was quite warm, as had been several preceding days. A thunder gust, from the west, arose about noon, accompanied with wind only here; this was succeeded, for an hour or two, by an intense heat; but, towards sunset, the wind sprang up—a chilling breeze, from the west, and within two hours fires became comfortable. The morning furnished abundant evidence of frost on the low grounds, in every direction; and I was yesterday informed, by several gentlemen, that corn blades, and the tops of the sweet potatoe, were, in many places, destroyed. On the night of the 28th we had another frost.

Thus, Sir, in this mild climate, to which I had retired to escape the piercing blasts of the north on a hectic constitution, we have had frost through all the

vernal and summer months, and vicissitudes so rapid as to try the best constitutions. However singular these phenomena, they have approached us gradually through a series of twelve or fourteen years, leaving their noxious traces on all living matter.

In a community abounding in men of great scientific acquirements, it becomes me to say but little on a subject requiring for its successful discussion a range of information and authority beyond my reach. Whatever may have been the opinions of Dr. Herschell, aided by such optics as he possessed, of the real nature and effects of the *solar maculæ*, the fact, that the privation of heat, this summer, has also been accompanied by a correspondent privation of light, of which I have no doubt, furnishes a weighty *a posteriori* argument in favour of the opposing opinion of our American Wiley. The inference drawn by the venerable Herschell, from a comparison of Smith's Wealth of Nations and La Lande's Solar Observations, as furnishing evidence of the abundance of wheat in those seasons when solar maculæ have been most numerous, and, thence, also evidence of a corresponding increased temperature, appears directly the reverse of the one, which facts, in our hemisphere at least, seem to justify. The coldest seasons within recollection in Virginia, are the present, and one a short time prior to the revolutionary war, which was rendered memorable by a severe frost in the month of June. That season, as well as the present, was distinguished by a very abundant wheat crop; and all the planters with whom I have conversed, agree, that cool springs and summers are most favourable to that grain.

But be these things as they may, is there not in operation on our planet, a process, the *chef-d'œuvre* of which is an unequal and periodical distribution of caloric. The melancholy fate of the infant colony of Norwegians at East-Greenland, and a corresponding and permanent accumulation of ice all over the arctic regions, for above half a century; and a process the reverse of this, and now evidently begun, and apparently cotemporaneous with the opening of the present century, seem to favour the opinion of such a periodical distribution. On the assumption of a given quantity of solar heat in a given

series of years, the inherent warmth of the earth remaining stationary at nearly 52°, by what other means than a transmission of equatorial and tropical temperature to the polar regions, aided by convulsing tempests, the probable consequence of such a distribution, can a disrupture and solution of their frozen plains be accomplished? A process of this kind as its reverse, continuing through a series of years, puts out of the question the agency of any very irregular, slight, or transitory causes.

If, in proceeding thus far, we have trod on ground any more permanent than the frozen plains of which we have spoken, can we conceive a more powerful and appropriate means for the transmission of tropical warmth, than the tempests which, in August last, swept the whole bosom of the Atlantic with an irresistible momentum? A suffocating warmth, resembling the *salanos* of Africa and Arabia, accompanied with luminous flashes, were observed as high north as the shores of the New-England States. Thus an atmospherical column, whose base was nearly, or quite equal to the semi-diameter of the earth, passing with destructive violence towards the polar latitudes, may be considered as a very fit vehicle of heat. What effect this phenomenon may have had in qualifying the temperature of those regions, may remain a problem; but if this be supposed, in any degree, to be the case, the great abundance of ice diffused all over the Atlantic this summer, together with the cotemporaneous rise and deluging operations of our great western waters, and cooling our climate to an extent before unknown, may be considered as powerful *return* cargoes.

This doctrine of the transmission of refrigerating causes towards the tropics, while it furnishes a satisfactory explanation of the reduced temperature of our spring and early summer months, has also this advantage, that in it we can discover a ready solution of the vicissitudes which lately mark our weather; and which, as being less dependent on the more uniform agency of solar influence than the course of the winds and oceanic currents, must also be equally capricious.

MALACHI FOOT.

### *Carotid Aneurism.*

The operation for the carotid aneurism has again been successfully performed at the New-York Hospital, by Wright Post, M. D. one of the surgeons of that charity. The patient was a woman, between twenty and thirty years of age. The tumour was situated on the right side of the neck, and apparently as large as a small hen's egg. The operator, with remarkable skill, tied the artery in two places, and then divided it between the ligatures. The patient bore the operation with almost unexampled firmness; no alarming symptoms supervened, and she is in the progress of perfect recovery.

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### *Medical Virtues of Button-Snake-Root* (Liatris Spicata.)

It appears that the elegant North-American plant, known to botanists by the name of *liatris spicata*, is cultivated in the garden of the united Society called *Shakers*, at Lebanon, in Columbia County, New-York. It is by them called *button-snake-root*, and reputed to possess excellent powers as a remedy. The history of its introduction to their plantation, and of its medicinal virtues, are contained in the following letter from Mr. Garret K. Lawrence to Samuel L. Mitchill, M. D. &c. dated

*Lebanon-Springs, Nov. 21st*, 1816.

Respected Friend,

I leave a plant for your inspection, called by us *button-snake-root*. We have found it useful in colic and gravel. The root will grow, if you set in the ground this season.

The first knowledge that we obtained of this plant was in 1810, at Gasper, in Logan County, Kentucky; one of our brethren, (a physician), while on a journey there, discovered this new and beautiful plant; and, from its smell and taste, was sensible that it would be useful in medicine. When he arrived there, they informed him that they had found it beneficial in colic, and that they called it *button-snake-root*. He obtained some of the dried roots, and brought them home; making search, on his way home, for the plant, through the upper part of Virginia, Pennsylvania, and New-Jersey.

Soon after he got home, he had an opportunity of giving it a trial. The patient was a man of fifty years of age; he was taken with a violent pain in his side, just below his ribs, thence to his kidnies, and then in his bowels, with sickness at the stomach and palpitation of the heart, and various symptoms resembling bilious colic and gravel. He had been subject to these turns about three years, and they seemed to increase, coming oftener and more violent. After various trials of other medicines, to little effect more than a temporary relief, he took the infusion of *liatris*, and it relieved him in a few minutes; it proved gently diaphoretic and powerfully diuretic, and left him free of that soreness that usually followed his complaint. He has felt some symptoms of his disorder since, but they have always yielded to this medicine; and, at present, he is entirely free from it. We have found it useful in various other cases of colic, and in measles, combined with saffron and marygold flowers, and have never known any bad effects from its use in any case. In a case of stranguary, we gave a tincture of it in gin, and it proved effectual. Our general custom of giving it has been in infusion, of about ℥ ss. of the bruised dry root in a quart of boiling water, steeped for an hour and strained, and taken in doses of a gill to half a pint occasionally.

We have made search for this plant in the country around us, and in the Eastern States, but have never seen it growing wild, except on the Pickaway Plains, in Ohio, and on the Barrens, in Kentucky. We obtained the seed from Kentucky; it grows to perfection in our gardens, and stands the winters completely well, &c.

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### *Method of treating the supposed Poison of Obi, among the Negroes.*

A plant believed to possess extraordinary powers in resisting and overcoming the poison of roots, or something else, which negroes who have the influence of *obi* are accused of administering to other persons of their own colour, has lately been presented to us. The specimen grew in North-Carolina, and is, no doubt, the *gentiana saponaria*. It grows also in the neighbourhood of New-York. The following letter from W. H.

Fowler, dated December 18, 1816, contains the opinion of the writer concerning it:—

"The herb which I showed Dr. Mitchill, was for a long time used by an old African, in the cure of cases of supposed poisons, with success. While on his death-bed, he requested to see me, in order, as he said, "to communicate his secret to me before he died." He did so, and also the manner in which he prepared it; *viz.* ℥ i. of the root of which you have a specimen, ℥ ij. of pepper, ℥ ij. of ginger, and ℥ ss. of the root which I mentioned to you, but which I have not with me. These he pulverized, and added ℥ viij. of brandy, and the same quantity of water, of which he gave a wine-glassful twice a-day."—[*Here follows the narrative of a successful case, apparently a peripneumonia notha, in a negro wench, that had been much despaired of.*]

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*Improvement in Anatomy.*

Anthony Finley, of Philadelphia, has commenced the publication, in quarto, of John Bell's Engravings of the Bones, Muscles, and Joints of the Human Body. From the appearance of the first volume, or first part, containing the Bones, we have formed a very favourable opinion of this American edition. As our country is eminently favourable to the profession of physic, and contains valuable schools for teaching all its branches, the present publication may be considered as aiding very substantially the acquirement of anatomical knowledge. We have also seen the second edition of Charles Bell's Engravings of the Human Arteries, beautifully executed, under the care of the same enterprising publisher.

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*Economical Chemistry.*

Under the auspices of the Common Council of New-York, Dr. Hare, a gentleman well known as a practical and able chemist, has been engaged for some months in a series of experiments for furnishing inflammable air for public and private lamps. Numerous proofs have been afforded of the strength, and, at the same time, of the mildness of the light procured in this manner. While Dr. H. was engaged in constructing the apparatus, Dr. Samuel Akerly, a member of the Corporation of the

city, delivered two lectures, accompanied with appropriate experiments, on the scientific principles and philosophical history of thermo-lamps and gas-lights. Since which, we understand that Mr. David Melville, of Rhode-Island, has projected an improvement, of condensing, by means of a forcing pump, several hundred gallons of the carburetted hydrogenous air into the space usually occupied by one gallon. This compression is made in a strong vessel, resembling that in which the carbonic acid gas is forced mechanically to unite with a liquid in the fashionable beverage called *soda water*. After that method, it is proposed that casks of condensed inflammable gas may be transported from the grand reservoir, or manufactory, to any place or distance, and there be drawn off for consumption. Whether such an ingenious plan can be carried into effect with real advantage, must be determined by those who are concerned in the economical details of this promising improvement.

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### *Natural History of Animals.*

Professor Delamarck, of Paris, has studied, with singular success, the organization and structure of the vast tribes of animals which are destitute of vertebræ. He has manifested more science and method in this department of zoology than any other person. Following the march of nature, M. Delamarck travels from the monad, a creature as small as the eye, aided by the microscope, can discern, up the long and diversified chain of being, to the colossal sepia, the most huge and enormous inhabitant of the terraqueous globe.* The creatures without backbones are distributed into ten classes, while the vertebrated animals occupy but four. The classification is founded upon the anatomical and physiological characters of the several species; and is an example of analytical investigation, which deserves a rank among the foremost efforts of modern genius.

This system of zoology has been lately taught in the University of New-York, and is in reality a course of comparative anatomy. On the classes of the fishes and

* Med. Rep. vol. xvi. p. 396—407.

mammalia, Professor Mitchill follows the arrangement of LINNÆUS; on the amphibia, that of LAURENTI; and on the birds, that of LATHAM: and, throughout the whole, superadds his own modifications, which are essentially necessary in a region possessing the grand and peculiar features of North-America.

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*Elliot's new Work on Botany.*

We have seen the first number of a publication on the Plants of South-Carolina and Georgia, by Stephen Elliot, Esq. Though offered under the title of "a Sketch," it has the appearance of a matured and extensive work. With a strong relish for botany, and with the enjoyment of health, industry, friends, and fortune, the author has achieved an undertaking which deserves to be considered a volume of authority.

He has adapted it not merely to the situation and wants of the Southern States, but to the general convenience of the learned world. The long observations and skilful inquiries of Mr. Elliot have been aided by the talents of Dr. JAMES MACBRIDE, who has carefully studied the medicinal as well as the botanical history of the plants. From the practical and experimental character of both these gentlemen, joined to their opportunity and ability, there is every reason to believe this will be the great standard or text-book for the region which it embraces.

Before us lie one hundred pages of letter-press, and two copperplate prints, on which are eight figures of grasses. The engravings which embellish this publication, are highly reputable to the skill and accuracy of Mr. *Wood*.

After a modest and sensible preface, follows a glossary, containing an explanation of the terms most commonly used in botany. These are principally extracted from Martyn's Language of the Science. Then begins the description of the genera and species, according to the sexual system; accompanied with synonymes, references, and remarks, to render every article plain, intelligible, and interesting: and it proceeds through the entire classes of Monandria and Diandria, and the first or monogynous order of Triandria.

We look earnestly for the succeeding numbers, as every paragraph of the present evinces the eye and the hand of a master. We congratulate the lovers of botany in all countries, but more especially in our own, on the auspicious and promising commencement of so important a work.

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### *Wild Rice of North-America, or* Fausse Avoine.

We have received from Col. Samuel Hawkins, seeds of the zizania, or native rice of the lakes. Some of them are contained in their husk, and resemble oats; others are separated from the cover, and are quite naked; while yet others are in a state of preparation for human food. The Winnebagoes, Chipawas, and other natives, gather this grain for food; and it answers the purpose as well as maize or any other grain. It grows wild in great abundance, affording a spontaneous and plentiful harvest. The information given us by this very intelligent gentleman, confirms the statement in the Introductory Discourse to the Literary and Philosophical Society of New-York, note 33, near the end, where the cultivation of it is anticipated. The prepared grain tastes very much like Indian corn, or perhaps rather more like rice. The tribes who were called *Fausse-avoine*, seem to have been so nick-named from the *false oats* (zizania, or wild rice) which they fed upon. It offers to human beings a grand magazine of bread-corn.

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### *Woad cultivated for dyeing Blue.*

Indigo is frequently both scarce and dear; it is therefore desirable to find a substitute for that article, so important in the manufacture of cotton and wool. This has been discovered in the plant called *isatis tinctoria* by botanists, *pastel* by the French, and *woad* by the English. We observe that Henry A. S. Dearborn, Esq. has translated and published M. Lasteyrie's famous Treatise on the Culture, Preparation, History, and Analysis of this Vegetable. Mr. Dearborn has proved, that the plants grow perfectly well in Massachusetts,

and are not injured in the least by the frosts of winter. The present work has been executed for the purpose of affording assistance to the agricultural and manufacturing interests of the United States; and the translator liberally offers a sample of the seeds to any person who shall feel inclined to attempt their cultivation.

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### *The Institute of New-York.*

The apartments given by the Corporation of New-York to the votaries of literature, science, and the arts, are occupied by their respective grantees. The collections of books, manuscripts, and papers belonging to the Historical Society, have been duly deposited in this place of safety, and arranged by the industry and taste of John Pintard, Esq. On the anniversary of the discovery of New Netherland by Hudson, in 1609, the late Hon. Governeur Morris delivered, as President, a patriotic and eloquent discourse.—The Literary and Philosophical Society possesses a well furnished and commodious hall, in which stated meetings are held once a month. So many interesting communications have been made, that a second volume of its Transactions is in meditation.—The Academy of Arts has succeeded in exhibiting a very splendid and numerous collection of paintings, statues, busts, and drawings. At the opening of this elegant establishment, a discourse was pronounced by De Witt Clinton, LL. D. to a crowded and brilliant audience; which, for matter, composition, and delivery, ranks among the best of that gentleman's excellent performances.—The gratification of the visitors to the galleries was exceedingly increased by the perspicuous and descriptive catalogue prepared by William Dunlap, Esq.—Great preparations are making for the reception of Mr. Scudder's Museum of Natural History, where, among numberless other things, a fine display of animals, admirably prepared by this artist himself, may be expected.—Chambers also have been granted for the arrangement and display of Minerals; and from the known liberality of Col. Gibbs, Dr. Bruce, John G. Bogert, Esq. and several other amateurs, it is anticipated that an elegant cabinet will soon be formed. Other things are in progression.

## PROGRESS OF VACCINATION IN AMERICA. BY DR. FANCHER.

| Dates. | No. Vaccinated. | STATE. | No. Tested. | REMARKS. |
|---|---|---|---|---|
| 1802 | 275 | New-Jersey - - - - - - - - - | | |
| 1803 | 500 | New-Jersey and New-York - - - | 15 | Stopped the spreading of the small-pox, near the Scotch Plains, New-Jersey. |
| 1804 | 650 | N. Jersey, N. York, & Connecticut | 69 | Stopped the ravages of the small-pox at Stamford, Connecticut. |
| 1805 | 700 | Connecticut - - - - - - - - - | 35 | Broke up the inoculation of small-pox at Randolph, Vermont. |
| 1806 | 926 | Connecticut and Vermont - - - | 34 | Discovered a method of expediting the disease, producing symptoms two or three days sooner than usual. |
| 1807 | 1600 | Connecticut and Vermont - - - | 105 | Sent the vaccine matter to the West-India Islands. |
| 1808 | 400 | Vermont and New-Hampshire - - | 5 | Stopped the ravages of the small-pox among the United States troops at Swanton-Falls, Lake Champlain. |
| 1809 | 1499 | Massachusetts - - - - - - - - | 4 | Sent vaccine matter to various parts of the globe, by Capt. Herod, bound on a trading voyage. |
| 1810 | 7500 | Rhode-Island and Connecticut - - | 3 | Sent the vaccine matter to Rio Janeiro, and supplied the United States' squadron at New-London. |
| 1811 | 3500 | Connecticut and Massachusetts - | 75 | Prevented the small-pox spreading in Hartford, Connecticut. |
| 1812 | 1000 | New-York and Massachusetts - - | - - | Sent the vaccine matter to Russia. |
| 1813 | 2560 | New-York - - - - - - - - - | - - | Supplied the United States' ship Guerriere, and furnished the northern army with the vaccine. |
| 1814 | 4500 | Connecticut and New-York - - - | - - | Sent vaccine matter, in a crystalline state, to China. Established a Vaccine Institution in Albany and Philadelphia. |
| 1815 | 3460 | Connecticut and Massachusetts - | - - | Supplied foreign Missions with the vaccine; stopped the small-pox among the Canandaigua tribe of Indians, and furnished the Custom-House in Salem with matter for ships bound on long voyages. |
| | 29070 | | 345 | |
| | 4000 | Natives and Blacks. | | |
| | 33070 | Total. | | None have died of the vaccine, and none have taken the small-pox. |

*Mineralogical Sketch of Cherry-Valley, in the County of Montgomery, by* J. O. Morse, *Esq. in a Communication to Gen. C. D. Colden, dated 4th July,* 1816.

There are to be found here, as in several other parts of the state, a great variety of petrifactions of marine shells, the horns of land animals, and of plants; all in the same place. They are found in our deepest vallies, and on our highest hills. There is one fact connected with them, that has always escaped the observation of those few gentlemen in this country who have favoured us with their ideas on these petrifactions. It is this:— Our vallies are mostly bedded with limestone, and in the midst of large masses of this, these petrifactions are to be found. As you ascend, to a certain height, the hills on each side of the valley, the limestone disappears, and the soil is totally different. Confused masses of the slate kind are found, some lying horizontal, others projecting from the ground, at an angle of about forty-five degrees; and in the midst of these masses of slate rocks, are to be found the same petrifactions. The water which issues from the sides of these hills in small rivulets, is, in many places, strongly tinctured with iron ore, so much so, that it frequently tinges all the stones it washes of a red colour, this being the colour of all the iron ore of the western country. There are a great many other phenomena observable in the country about us, that could not fail to be interesting to the naturalist.

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*New Publication.*

Dr. Heustis, of this city, has in the press of Messrs. T. & J. Swords, a work entitled, *Physical Observations, and Medical Tracts and Researches, on the Topography and Diseases of Louisiana.*

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☞ The *official papers* alluded to in page 334, had not been seen by the writer, until lately, in the Appendix to the 4th edition of Thomas's Practice, and in a recent small pamphlet. They will be duly attended to, if necessary, in our next volume.

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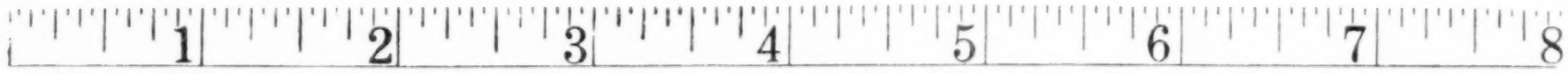

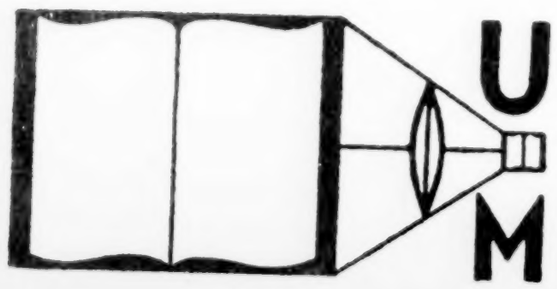

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